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 ********** STN Columbus **********
FILE 'HOME' ENTERED AT 10:47:26 ON 22 NOV 2000
=> file biosis caba caplus embase lifesci medline scisearch uspatfull japio
=> e tripp cynthia/au
E1        2   TRIPP CINDY A/AU
E2        2   TRIPP CLARA F/AU
E3        0 --> TRIPP CYNTHIA/AU
E4       16   TRIPP CYNTHIA A/AU
E5       31   TRIPP CYNTHIA ANN/AU
E6       16   TRIPP D/AU
E7       13   TRIPP D A/AU
E8        2   TRIPP D B/AU
E9        1   TRIPP D E/AU
E10       1   TRIPP D G/AU
E11       1   TRIPP D J/AU
E12       3   TRIPP D M/AU
=> s e4-e5
L1       47 ("TRIPP CYNTHIA A"/AU OR "TRIPP CYNTHIA ANN"/AU)
= dup rem l1
PROCESSING COMPLETED FOR L1
L2       34 DUP REM L1 (13 DUPLICATES REMOVED)
=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 34 ANSWERS - CONTINUE? Y/(N):y
L2  ANSWER 1 OF 34  BIOSIS  COPYRIGHT 2000 BIOSIS     DUPLICATE 1
AN  2000:386450  BIOSIS
DN  PREV200000386450
TI  Parasitic helminth larval thiol specific antioxidant proteins, nucleic
    acid molecules and uses thereof.
AU  Klimowski, Laur (1);  ***Tripp, Cynthia Ann***
CS  (1) Ft. Collins, CO USA
    ASSIGNEE: Heska Corporation, Ft. Collins, CO, USA
PI  US 6031077 February 29, 2000
SO  Official Gazette of the United States Patent and Trademark Office Patents,
    (Feb. 29, 2000) Vol. 1231, No. 5, pp. No pagination. e-file.
    ISSN: 0098-1133.
DT  Patent
LA  English
AB  The present invention relates to parasitic helminth thiol specific
    antioxidant (TSA) larval proteins; to parasitic helminth larval TSA
    nucleic acid molecules, including those that encode such TSA proteins; to
    antibodies raised against such TSA proteins; and to compounds that inhibit
    parasitic helminth larval TSA activity. The present invention also
    includes methods to obtain such proteins, nucleic acid molecules,
    antibodies, and inhibitory compounds. Also included in the present
    invention are therapeutic compositions comprising such proteins, nucleic
    acid molecules, antibodies and/or inhibitory compounds as well as the use
    of such therapeutic compositions to protect animals from diseases caused
    by parasitic helminths.

L2  ANSWER 2 OF 34  CAPLUS  COPYRIGHT 2000 ACS      DUPLICATE 2
AN  2000:623706  CAPLUS
DN  133:220511
TI  A 39 kilodalton antigen common to parasitic helminths, cDNAs encoding them
    and the development of vaccines
IN  Grieve, Robert B.; Frank, Glenn R.; Smika-grieve, Marcia;  ***Tripp,***
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*** Cynthia Ann***
PA Heska Corp., USA; Colorado State Universtiy Research Foundation
SO U.S., 52 pp., Cont.-in-part of U.S. Ser. No. 3,389, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6114142	A	20000905	US 1995-473034	19950606
WO 9415593	A1	19940721	WO 1994-US679	19940112

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

PRAI US 1991-654226 19910212
US 1993-3389 19930112
US 1993-101283 19930803
WO 1994-US679 19940112
US 1993-3257 19930112
US 1993-109391 19930819

AB An antigen common to a no. of parasitic helminths that is a protein of about 39 kD (i.e., P39 proteins) that may be of use in the development of vaccines against these parasites is identified and cDNAs encoding it are cloned and expressed. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., and/or antibodies as well as the use of such therapeutic compns. to protect animals from diseases caused by parasitic helminths. The antigens recognized by dog immune serum to Dirofilaria immitis were identified by std. Western blots and the corresponding cDNAs cloned by antibody screening of expression libraries. Expression of the gene to generate a protein recognized by immune serum using Escherichia coli and in eukaryotic cells using Sindbis virus vectors is demonstrated.

RE.CNT 58
RE
(6) Amiri; Mol Biochem Parasitol 1988, V28, P113 CAPLUS
(8) Anon; WO 9213560 1992 CAPLUS
(10) Bianco; Mol Biochem Parasitol 1990, V39, P203 CAPLUS
(13) Chomczynski; Anal Biochem 1987, V162, P156 CAPLUS
(15) Culpepper; Mol Biochem Parasitol 1992, V54, P51 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 34 USPATFULL
AN 2000:102422 USPATFULL
TI Parasitic helminth p22U nucleic acid molecules
IN ***Tripp, Cynthia Ann*** , Ft. Collins, CO, United States
Frank, Glenn Robert, Ft. Collins, CO, United States
Grieve, Robert B., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6100390 20000808
AI US 1995-458860 19950602 (8)
RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now

patented, Pat. No. US 5639876 which is a continuation of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. Ser. No. US 1993-3389, filed on 12 Jan 1993 And Ser. No. US 1991-654226, filed on 12 Feb 1991 , said Ser. No. US 3257 And Ser. No. US 3389 which is a continuation-in-part of Ser. No. US 654226

DT Utility

EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Swartz, Rodney P.

LREP Sheridan Ross P.C.

CLMN Number of Claims: 11

ECL Exemplary Claim: 1

DRWN 2 Drawing Figure(s); 2 Drawing Page(s)

LN.CNT 2469

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to isolated parasitic helminth nucleic acid sequences capable of hybridizing, under stringent conditions, to at least a portion of D. immitis nucleic acid sequence p4 and/or to at least a portion of D. immitis nucleic acid sequence p22U; to isolated parasitic helminth proteins that are encoded by such parasitic helminth nucleic acid sequences and that are capable of selectively binding to at least one component of immune serum capable of inhibiting helminth development; and to antibodies raised against such isolated parasitic helminth proteins. The present invention also relates to therapeutic compositions comprising such isolated nucleic acid sequences, proteins and/or antibodies. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compositions capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L2 ANSWER 4 OF 34 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 3

AN 2000:291945 BIOSIS

DN PREV200000291945

TI Parasitic helminth P39 proteins, and uses thereof.

AU Grieve, Robert B. (1); Frank, Glenn R.; Mika-Grieve, Marci; ***Tripp,*** *** Cynthia Ann***

CS (1) Ft. Collins, CO USA
ASSIGNEE: Heska Corporation, Ft. Collins, CO, USA; Colorado State University Research Foundation, Ft. Collins, CO, USA

PI US 5977306 November 02, 1999

SO Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 2, 1999) Vol. 1228, No. 1, pp. No pagination. e-file..
ISSN: 0098-1133.

DT Patent

LA English

AB The present invention relates to parasitic helminth proteins of about 39 kD (i.e., P39 proteins); to parasitic helminth P39 nucleic acid molecules, including those that encode such proteins; and to antibodies raised against such proteins. The present invention also includes methods to obtain such proteins, nucleic acid molecules, and antibodies. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, and/or antibodies as well as the use of such therapeutic compositions to protect animals from diseases caused by parasitic helminths.

L2 ANSWER 5 OF 34 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 4

AN 1999:385879 BIOSIS
DN PREV199900385879
TI Parasitic helminth p22U proteins.
AU ***Tripp, Cynthia Ann (1)*** ; Frank, Glenn Robert; Grieve, Robert B.
CS (1) Department of Exercise and Sport Science, Colorado State University, Ft. Collins, CO USA
ASSIGNEE: Colorado State University Research Foundation
PI US 5912337 Jun. 15, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Jun.15, 1999) Vol. 1223, No. 3, pp. NO PAGINATION.
ISSN: 0098-1133.
DT Patent
LA English

L2 ANSWER 6 OF 34 USPATFULL
AN 1999:15487 USPATFULL
TI Dirofilaria immitis GP29 antibodies and uses thereof
IN ***Tripp, Cynthia Ann*** , Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5866126 19990202
AI US 1997-833622 19970408 (8)
RLI Continuation of Ser. No. US 1995-462177, filed on 5 Jun 1995, now patented, Pat. No. US 5618532 which is a continuation of Ser. No. US 1994-208885, filed on 8 Mar 1994, now patented, Pat. No. US 5569603, issued on 29 Oct 1996
DT Utility
EXNAM Primary Examiner: Caputa, Anthony C.; Assistant Examiner: Navarro, Mark
LREP Sheridan Ross P.C.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1757
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to D. immitis Gp29 proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and inhibitors of D. immitis glutathione peroxidase. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasitic helminths, such as heartworm.

L2 ANSWER 7 OF 34 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 5
AN 1998:564165 CAPLUS
DN 129:198889
TI Filariid nematode cysteine protease proteins, nucleic acid molecules and their uses to treat infection
IN ***Tripp, Cynthia Ann*** ; Wisnewski, Nancy; Grieve, Robert B.; Frank, Glenn R.
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 22 pp. Cont.-in-part of U. S. Ser. No. 153,554, abandoned.
CODEN: USXXAM

DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5795768	A	19980818	US 1995-486036	19950607
CA 2224184	AA	19961219	CA 1996-2224184	19960607
WO 9640884	A1	19961219	WO 1996-US9848	19960607
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
AU 9661678	A1	19961230	AU 1996-61678	19960607
AU 713837	B2	19991209		
EP 846165	A1	19980610	EP 1996-919309	19960607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT				
JP 11507820	T2	19990713	JP 1996-502047	19960607

PRAI US 1991-654226 19910212
US 1991-792209 19911112
US 1993-101283 19930803
US 1993-153554 19931116
US 1995-486036 19950607
WO 1996-US9848 19960607

AB The present invention provides for filariid nematode cysteine protease proteins; to filariid nematode cysteine protease nucleic acid mols., in particular, Dirofilaria immitis L3 larval cysteine protease nucleic acid mols. and Onchocerca volvulus L3 larval cysteine protease nucleic acid mols.; to antibodies raised against such proteins, and to compds. that inhibit filariid nematode cysteine protease activity. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies and/or inhibitors. The present invention also includes therapeutic compns. comprising such proteins, nucleic acid mols., antibodies and/or inhibitors, and the use of such compns. to protect an animal from disease caused by parasitic helminths.

L2 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 6
AN 1998:545389 CAPLUS
DN 129:172447
TI Dirofilaria and onchocerca larval l3 cysteine protease proteins and uses thereof
IN ***Tripp, Cynthia Ann*** ; Wisnewski, Nancy; Grieve, Robert B.; Frank, Glenn R.; Richer, Jennifer K.
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 22 pp. Cont.-in-part of U. S. Ser. No. 153,554, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5792624	A	19980811	US 1995-482282	19950607

PRAI US 1991-654226 19910212
US 1991-792209 19911112

US 1993-101283 19930803
US 1993-153554 19931116
AB The present invention describes filariid nematode cysteine protease proteins and their genes from Dirofilaria immitis and Onchocerca volvulus. Antibodies raised against cystein protease proteins and compds. that inhibit filariid nematode cysteine protease activity are described. Therapeutic compns. and methods to obtain such proteins, nucleic acid mols., antibodies and/or inhibitors are also described. The use of such compns. to protect an animal from heartworm disease caused by parasitic helminths is relayed.

L2 ANSWER 9 OF 34 USPATFULL
AN 1998:91825 USPATFULL
TI Parasitic helminth venom allergen antigen 5-like genes and proteins
IN ***Tripp, Cynthia Ann*** , Ft. Collins, CO, United States
Wisnewski, Nancy, Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5789194 19980804
AI US 1995-450944 19950523 (8)
DT Utility
EXNAM Primary Examiner: Hutzell, Paula K.; Assistant Examiner: Masood, Khalid
LREP Sheridan Ross P.C.
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1899
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasitic helminth venom allergen antigen 5-like proteins; to parasitic helminth venom allergen antigen 5-like nucleic acid molecules, including those that encode such proteins; and to antibodies raised against such proteins. The present invention also includes methods to obtain such proteins, nucleic acid molecules and antibodies. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules and/or antibodies, as well as the use of such therapeutic compositions to protect animals from diseases caused by parasitic helminths.

L2 ANSWER 10 OF 34 USPATFULL
AN 1998:51474 USPATFULL
TI Filariid nematode cysteine protease proteins
IN ***Tripp, Cynthia Ann*** , Ft. Collins, CO, United States
Frank, Glenn R., Ft. Collins, CO, United States
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5750391 19980512
AI US 1995-463989 19950605 (8)
RLI Continuation of Ser. No. US 1994-249552, filed on 26 May 1994, now abandoned
DT Utility
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai
LREP Sheridan Ross P.C.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings

LN.CNT 2683
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasite astacin metalloendopeptidase and filariid cysteine protease proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and compounds that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasites, such as heartworm.

L2 ANSWER 11 OF 34 USPATFULL
AN 1998:45324 USPATFULL
TI Parasitic helminth larval thiol specific antioxidant proteins and nucleic acid molecules
IN Klimowski, Laura, Ft. Collins, CO, United States
Tripp, Cynthia Ann , Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5744593 19980428
AI US 1996-602262 19960215 (8)
DT Utility
EXNAM Primary Examiner: Minnifield, Nita
LREP Sheridan Ross P.C.
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1772
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasitic helminth thiol specific antioxidant (TSA) larval proteins; to parasitic helminth larval TSA nucleic acid molecules, including those that encode such TSA proteins; to antibodies raised against such TSA proteins; and to compounds that inhibit parasitic helminth larval TSA activity. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitory compounds. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies and/or inhibitory compounds as well as the use of such therapeutic compositions to protect animals from diseases caused by parasitic helminths.

L2 ANSWER 12 OF 34 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 7
AN 1997:436582 CAPLUS
DN 127:107982
TI Parasitic helminth proteins of Dirofilaria immitis, cDNA cloning, and their use to prevent heartworm infection
IN ***Tripp, Cynthia Ann*** ; Frank, Glenn Robert; Grieve, Robert B.
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 28 pp. Cont.-in-part of U.S. Ser. No. 3,257, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	US 5639876	A	19970617	US 1993-109391	19930819
	CA 2153494	AA	19940721	CA 1994-2153494	19940112
	WO 9415593	A1	19940721	WO 1994-US679	19940112
	W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9461254	A1	19940815	AU 1994-61254	19940112
	EP 680316	A1	19951108	EP 1994-907845	19940112
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE				
	JP 08505772	T2	19960625	JP 1994-516380	19940112
	US 5686080	A	19971111	US 1995-459019	19950602
	US 5912337	A	19990615	US 1995-460428	19950602
	US 6100390	A	20000808	US 1995-458860	19950602
	US 5977306	A	19991102	US 1995-487031	19950606
	US 6099843	A	20000808	US 1995-483474	19950607
	AU 9864878	A1	19980827	AU 1998-64878	19980512
PRAI	US 1991-654226	19910212			
	US 1993-3257	19930112			
	US 1993-3389	19930112			
	US 1993-101283	19930803			
	US 1993-109391	19930819			
	WO 1994-US679	19940112			
	US 1994-225479	19940408			
	US 1995-408120	19950320			

AB Parasitic helminth nucleic acid sequences capable of hybridizing to at least a portion of the nucleic acid sequence encoding p4 or p22U of Dirofilaria immitis are provided. The p4-encoding nucleic acid sequence is about 913 nucleotides in length and comprises an open reading frame of 303 amino acids which has an LDL receptor-related protein class A cysteine-rich motif of 9 amino acids. The p4 nucleic acid was isolated from a D. immitis L3 and/or L4 cDNA expression library using immune serum collected from a dog that was immunized by repeated chem. abbreviated infections. The p22U nucleic acid encodes at least a substantial portion of the P22U protein, which has been identified in larval excretory-secretory exts. as well as in exts. of L3,L4 and adults. The parasitic helminth proteins are capable of selectively binding to .gtoreq.1 components of immune serum and thus inhibiting helminth development. Antibodies against such isolated parasitic helminth proteins are also raised. Therapeutic compn.s contg. such isolated nucleic acid sequences, proteins, and/or antibodies are provided. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies, and therapeutic compns. capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L2 ANSWER 13 OF 34 CAPLUS COPYRIGHT 2000 ACS
AN 1997:557654 CAPLUS
DN 127:229657
TI Parasitic larval helminth thiol-specific antioxidant proteins, nucleic acid molecules, and uses thereof
IN Klimowski, Laura; ***Tripp, Cynthia Ann***
PA Heska Corporation, USA; Klimowski, Laura; Tripp, Cynthia Ann

SO PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9729766	A1	19970821	WO 1997-US2361	19970213
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5744593	A	19980428	US 1996-602262	19960215
CA 2243562	AA	19970821	CA 1997-2243562	19970213
AU 9722736	A1	19970902	AU 1997-22736	19970213
AU 715408	B2	20000203		
EP 914140	A1	19990512	EP 1997-905970	19970213
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2000505296	T2	20000509	JP 1997-529521	19970213
US 6031077	A	20000229	US 1998-4716	19980107

PRAI US 1996-602262 19960215
WO 1997-US2361 19970213

AB The present invention relates to parasitic helminth thiol specific antioxidant (TSA) larval proteins; to parasitic helminth larval TSA-specifying nucleic acid mols., including those that encode such TSA proteins; to antibodies raised against such TSA proteins; and to compds. that inhibit parasitic helminth larval TSA activity. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies, and inhibitory compds. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., antibodies and/or inhibitory compds. as well as the use of such therapeutic compns. to protect animals from diseases caused by parasitic helminths.

L2 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2000 ACS
AN 1997:448060 CAPLUS
DN 127:64511
TI Macrophage migration inhibitory factors of parasitic helminths and the genes encoding them and the development of therapeutics
IN ***Tripp, Cynthia Ann*** ; Brandt, Kevin S.; Wisnewski, Nancy
PA Heska Corporation, USA
SO PCT Int. Appl., 102 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9718229	A1	19970522	WO 1996-US18541	19961115
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,				

DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
US 5681724 A 19971028 US 1995-558735 19951116
CA 2237818 AA 19970522 CA 1996-2237818 19961115
AU 9710553 A1 19970605 AU 1997-10553 19961115
AU 718332 B2 20000413
EP 882060 A1 19981209 EP 1996-941398 19961115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, MC, PT, IE
JP 2000501925 T2 20000222 JP 1997-519153 19961115
PRAI US 1995-558735 19951116
WO 1996-US18541 19961115
AB Macrophage inhibitory factors (MIFs) derived from parasitic helminths, specifically Dirofilaria immitis and Onchocerca volvulus, are identified and cDNAs encoding them are cloned. The protein is useful as a target for the development of therapeutic agents for the treatment of infestation. Useful agents include antibodies to the protein. Cloning and expression of cDNAs for MIFs of D. immitis and O. volvulus is described.

L2 ANSWER 15 OF 34 USPATFULL
AN 97:109749 USPATFULL
TI Filariid cysteine protease genes
IN ***Tripp, Cynthia Ann*** , Ft. Collins, CO, United States
Frank, Glenn R., Ft. Collins, CO, United States
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5691186 19971125
AI US 1995-463262 19950605 (8)
RLI Continuation of Ser. No. US 1994-249552, filed on 26 May 1994, now abandoned
DT Utility
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai
LREP Ross P.C., Sheridan
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2667
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasite astacin metalloendopeptidase and filariid cysteine protease proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and compounds that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasites, such as heartworm.

L2 ANSWER 16 OF 34 USPATFULL
AN 97:104113 USPATFULL

TI Parasitic helminth p4 proteins
IN ***Tripp, Cynthia Ann*** , Ft. Collins, CO, United States
Frank, Glenn Robert, Ft. Collins, CO, United States
Grieve, Robert B., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5686080 19971111
AI US 1995-459019 19950602 (8)
RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation-in-part of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. Ser. No. US 1993-3389, filed on 12 Jan 1993, now abandoned And Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US -3257 And Ser. No. US -3389 , each Ser. No. US - which is a continuation-in-part of Ser. No. US -654226
DT Utility
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2279
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to isolated parasitic helminth nucleic acid sequences capable of hybridizing, under stringent conditions, to at least a portion of D. immitis nucleic acid sequence p4 and/or to at least a portion of D. immitis nucleic acid sequence p22U; to isolated parasitic helminth proteins that are encoded by such parasitic helminth nucleic acid sequences and that are capable of selectively binding to at least one component of immune serum capable of inhibiting helminth development; and to antibodies raised against such isolated parasitic helminth proteins. The present invention also relates to therapeutic compositions comprising such isolated nucleic acid sequences, proteins and/or antibodies. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compositions capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L2 ANSWER 17 OF 34 USPATFULL
AN 97:99177 USPATFULL
TI Parasitic helminth macrophage inhibitory factor nucleic acid molecules and uses thereof
IN ***Tripp, Cynthia Ann*** , Ft. Collins, CO, United States
Brandt, Kevin S., Windsor, CO, United States
Wisnewski, Nancy, Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5681724 19971028
AI US 1995-558735 19951116 (8)
DT Utility
EXNAM Primary Examiner: Horlick, Kenneth R.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN No Drawings

LN.CNT 2271
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasitic helminth macrophage migration inhibitory factor (MIF) proteins; to parasitic helminth MIF nucleic acid molecules, including those that encode such MIF proteins; to antibodies raised against such MIF proteins; and to compounds that inhibit parasitic helminth MIF activity. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitory compounds. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies and/or inhibitory compounds as well as the use of such therapeutic compositions to protect animals from diseases caused by parasitic helminths.

L2 ANSWER 18 OF 34 USPATFULL
AN 97:29198 USPATFULL
TI Dirofilaria immitis Gp29 proteins and uses thereof
IN ***Tripp, Cynthia A.*** , Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5618532 19970408
AI US 1995-462177 19950605 (8)
RLI Continuation of Ser. No. US 1994-208885, filed on 8 Mar 1994, now patented, Pat. No. US 5569603
DT Utility
EXNAM Primary Examiner: Hendricks, Keith D.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 16
ECL Exemplary Claim: 15
DRWN No Drawings
LN.CNT 1784
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to D. immitis Gp29 proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and inhibitors of D. immitis glutathione peroxidase. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasitic helminths, such as heartworm.

L2 ANSWER 19 OF 34 CAPLUS COPYRIGHT 2000 ACS
AN 1997:124448 CAPLUS
DN 126:127883
TI Cloning of filariid nematode cysteine protease cDNA, treatment of infection, and assays for inhibitors of the protease
IN Wisnewski, Nancy; Grieve, Robert B.; Frank, Glenn R.; ***Tripp, Cynthia*** *** Ann***
PA Colorado State University Research Foundation, USA; Heska Corporation; Wisnewski, Nancy; Grieve, Robert B.; Frank, Glenn R.; Tripp, Cynthia Ann
SO PCT Int. Appl., 115 pp.
CODEN: PIXXD2
DT Patent

LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9640884	A1	19961219	WO 1996-US9848	19960607
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
US 5795768	A	19980818	US 1995-486036	19950607
AU 9661678	A1	19961230	AU 1996-61678	19960607
AU 713837	B2	19991209		
EP 846165	A1	19980610	EP 1996-919309	19960607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT				
JP 11507820	T2	19990713	JP 1996-502047	19960607
PRAI US 1995-486036		19950607		
US 1991-654226		19910212		
US 1991-792209		19911112		
US 1993-101283		19930803		
US 1993-153554		19931116		
WO 1996-US9848		19960607		

AB The present invention provides for filariid cysteine protease proteins; to filariid nematode cysteine protease nucleic acid mols., in particular, Dirofilaria immitis L3 larval cysteine protease nucleic acid mols. and Onchocerca volvulus L3 larval cysteine protease nucleic acid mols.; to antibodies raised against such proteins, and to compds. that inhibit filariid nematode cysteine protease activity. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies and/or inhibitors. The present invention also includes therapeutic compns. comprising such proteins, nucleic acid mols., antibodies and/or inhibitors, and the use of such compns. to protect an animal from disease caused by parasitic helminths. The cDNA's for Dirofilaria immitis and Onchocerca volvulus cysteine proteinase were cloned, sequenced, and expressed in bacteria, insect cells, and mammalian cells.

L2 ANSWER 20 OF 34 CAPLUS COPYRIGHT 2000 ACS
AN 1997:80499 CAPLUS
DN 126:88290
TI Parasitic helminth venom allergen antigen 5-like genes and proteins
IN ***Tripp, Cynthia Ann*** ; Wisnewski, Nancy
PA Heska Corporation, USA; Tripp, Cynthia Ann; Wisnewski, Nancy
SO PCT Int. Appl., 123 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9637218	A1	19961128	WO 1996-US7709	19960523
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				

RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN
US 5789194 A 19980804 US 1995-450944 19950523
CA 2221818 AA 19961128 CA 1996-2221818 19960523
AU 9658773 A1 19961211 AU 1996-58773 19960523
AU 723916 B2 20000907
EP 836481 A1 19980422 EP 1996-920490 19960523
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, LI, NL, SE, PT
PRAI US 1995-450944 19950523
WO 1996-US7709 19960523
AB The present invention relates to parasitic helminth venom allergen antigen 5-like proteins; to parasitic helminth venom allergen antien 5-like nucleic acid mols., including those that encode such proteins; and to antibodies raised against such proteins. The present invention also includes methods to obtain such proteins, nucleic acid mols. and antibodies. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols. and/or antibodies, as well as the use of such therapeutic compns. to protect animals from diseases caused by parasitic helminths. Thus, mol. cloning and sequencing of venom allergen antigen 5-like genes and proteins of Dirofilaria immitis and Onchocerca volvulus were described.

L2 ANSWER 21 OF 34 USPATFULL
AN 96:99157 USPATFULL
TI Dirofilaria immitis GP29 proteins, nucleic acid molecules and uses thereof
IN ***Tripp, Cynthia A.*** , Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5569603 19961029
AI US 1994-208885 19940308 (8)
DT Utility
EXNAM Primary Examiner: Hendricks, Keith D.
LREP Sheridan Ross & McIntosh
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1766
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to D. immitis Gp29 proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and inhibitors of D. immitis glutathione peroxidase. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasitic helminths, such as heartworm.

L2 ANSWER 22 OF 34 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 8
AN 1996:231792 BIOSIS
DN PREV199698795921
TI Molecular cloning of a developmentally regulated protein isolated from excretory-secretory products of larval Dirofilaria immitis.

AU Frank, Glenn R. (1); ***Tripp, Cynthia A.*** ; Grieve, Robert B.
CS (1) Paravax, Inc., 1825 Sharp Point Drive, Fort Collins, CO 80525 USA
SO Molecular and Biochemical Parasitology, (1996) Vol. 75, No. 2, pp. 231-240.
ISSN: 0166-6851.
DT Article
LA English
AB Three proteins isolated from the excretory-secretory products (ES) of larval Dirofilaria immitis have been previously characterized and termed the 20, 22L and 22U kDa proteins. Two of the proteins (20 and 22L) were produced and released around the time of the third molt and were specifically recognized by immune dog sera. An amino acid sequence common to both proteins was used to synthesize a DNA probe to molecularly clone these molecules from a 48-h third stage larval cDNA library. The DNA sequence of the isolated clones encoded a 17.5 kDa protein with a 21 amino acid hydrophobic leader sequence that when removed yielded a 15.3 kDa protein starting with the N-terminal sequence obtained from the 20 kDa protein and containing all sequences obtained from tryptic peptides of the 20 and 22L kDa proteins. It was hypothesized that the 20 and 22L kDa proteins were the same, differing only by a 21 amino acid hydrophobic leader sequence which was later cleaved. The calculated molecular masses were consistent with those determined by reducing Tris-tricine SDS-PAGE. Expression of the protein without the leader sequence was accomplished in Escherichia coli. Antiserum raised against the expressed protein demonstrated the presence of the protein in L3 and L4, but not in adults or microfilariae. Expression of the protein with the leader sequence using a baculovirus system demonstrated processing of the signal sequence at the same site as found in larval D. immitis ES. Sera from dogs immune to infection were reactive with the D. immitis proteins expressed in either E. coli or insect cells.

L2 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2000 ACS
AN 1996:134110 CAPLUS
DN 124:169381
TI Cloning of cDNA for parasitic proteases and their uses for preparing anti-parasite agents
IN ***Tripp, Cynthia Ann*** ; Frank, Glenn R.; Grieve, Robert B.
PA Paravax, Inc., USA
SO PCT Int. Appl., 120 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9532988	A1	19951207	WO 1995-US6685	19950525
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2189741	AA	19951207	CA 1995-2189741	19950525
AU 9526516	A1	19951221	AU 1995-26516	19950525

AU 702915 B2 19990311
EP 766693 A1 19970409 EP 1995-921435 19950525
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE
JP 10500854 T2 19980127 JP 1995-530582 19950525
US 5691186 A 19971125 US 1995-463262 19950605
US 5750391 A 19980512 US 1995-463989 19950605
AU 9923904 A1 19990617 AU 1999-23904 19990421
PRAI US 1994-249552 19940526
AU 1995-26516 19950525
WO 1995-US6685 19950525

AB The cDNAs encoding astacin metalloendopeptidase protein of Dirofilaria immitis (heartworm) and filariid cysteine protease protein are isolated and characterized., nucleic acid mols. having sequences that encode such proteins, antibodies raised against such proteins and compds. that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The cDNA can be used for the prodn. of the proteins and the antibodies against the proteins. The cDNAs and the antibodies are useful in the prepn. of anti-parasite compns.

L2 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2000 ACS
AN 1995:973629 CAPLUS
DN 124:7055
TI Dirofilaria immitis Gp29 proteins and nucleic acid molecules encoding them for vaccine production
IN ***Tripp, Cynthia Ann*** ; Selkirk, Murray E.; Grieve, Robert B.
PA Paravax, Inc., USA
SO PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9524198	A1	19950914	WO 1995-US2941	19950307

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 5569603 A 19961029 US 1994-208885 19940308
CA 2183963 AA 19950914 CA 1995-2183963 19950307
AU 9519856 A1 19950925 AU 1995-19856 19950307
EP 749312 A1 19961227 EP 1995-912824 19950307
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE
JP 09510102 T2 19971014 JP 1995-523643 19950307
US 5618532 A 19970408 US 1995-462177 19950605
US 5866126 A 19990202 US 1997-833622 19970408
PRAI US 1994-208885 19940308
WO 1995-US2941 19950307
US 1995-462177 19950605

AB Gp29 protein (glutathione peroxidase) is produced by D. immitis L3, L4, and adult stages and may protect the heartworms from oxidants produced by the host's cellular immune system, e.g. the oxidative H2O2 burst of

leukocytes and secondary products of lipid peroxidn. Recombinant nucleic acid mols. encoding Gp29 proteins are provided for prodn. of vaccines which elicit formation of antibodies to neutralize D. immitis glutathione peroxidase and to protect animals from disease caused by parasitic helminths, such as heartworms.

L2 ANSWER 25 OF 34 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1996:344179 BIOSIS
DN PREV199699066535
TI Vaccine research and development for the prevention of filarial nematode infections.
AU Grieve, Robert B.; Wisnewski, Nancy; Frank, Glenn R.; ***Tripp, Cynthia*** *** A.***
CS Paravax Inc., Fort Collins, CO 80525 USA
SO Powell, M. F. [Editor]; Newman, M. J. [Editor]. (1995) pp. 737-768. Pharmaceutical Biotechnology, Vol. 6; Vaccine design: The subunit and adjuvant approach.
Publisher: Plenum Press 233 Spring Street, New York, New York, USA.
ISBN: 0-306-44867-X.
DT Book
LA English

L2 ANSWER 26 OF 34 CAPLUS COPYRIGHT 2000 ACS
AN 1995:130543 CAPLUS
DN 122:7946
TI Parasitic helminth proteins of Dirofilaria immitis and cDNA cloning
IN Grieve, Robert B.; Frank, Glenn R.; Mika-Grieve, Marcia; ***Tripp,*** *** Cynthia Ann***
PA Paravax, Inc., USA; Colorado State University Research Foundation
SO PCT Int. Appl., 153 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9415593	A1	19940721	WO 1994-US679	19940112
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5639876	A	19970617	US 1993-109391	19930819
AU 9461254	A1	19940815	AU 1994-61254	19940112
EP 680316	A1	19951108	EP 1994-907845	19940112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE				
JP 08505772	T2	19960625	JP 1994-516380	19940112
US 5977306	A	19991102	US 1995-487031	19950606
US 6114142	A	20000905	US 1995-473034	19950606
US 6060281	A	20000509	US 1995-482304	19950607
US 6099843	A	20000808	US 1995-483474	19950607
PRAI US 1993-3257		19930112		
US 1993-3389		19930112		
US 1993-109391		19930819		
US 1991-654226		19910212		

US 1993-101283 19930803
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320

AB Parasitic helminth nucleic acid sequences capable of hybridizing to at least a portion of nucleic acid sequence p4, p22U, P39, P22L and or P20.5 of Dirofilaria immitis are provided. The parasitic helminth proteins are capable of selectively binding to .gtoreq.1 components of immune serum and thus inhibiting helminth development. Antibodies against such isolated parasitic helminth proteins are also raised. Therapeutic compns. contg. such isolated nucleic acid sequences, proteins and/or antibodies are claimed. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compns. capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L2 ANSWER 27 OF 34 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 9
AN 1994:111033 BIOSIS
DN PREV199497124033
TI Nucleotide sequence of a minicircle from Leishmania infantum.
AU ***Tripp, Cynthia A.*** ; Myler, Peter J.; Stuart, Kenneth D. (1)
CS (1) Seattle Biomed. Res. Inst., 4 Nickerson St., Seattle, WA 98109-1651 USA
SO Molecular and Biochemical Parasitology, (1993) Vol. 62, No. 2, pp. 319-320.
ISSN: 0166-6851.
DT Article
LA English

L2 ANSWER 28 OF 34 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 10
AN 1993:141867 BIOSIS
DN PREV199395074667
TI Identification of two Th1 cell epitopes on the Babesia bovis encoded 77-kilodalton merozoite protein (Bb-1) by use of truncated recombinant fusion proteins.
AU Brown, Wendy C. (1); Zhao, Shumin; Woods, Vivienne M.; ***Tripp, Cynthia*** *** A.*** ; Tetzlaff, Christine L.; Heussler, Volker T.; Dobbelaere, Dirk A. E.; Rice-Ficht, Allison C.
CS (1) Dep. Veterinary Pathobiol., Texas A and M University, College Station, TX 77843 USA
SO Infection and Immunity, (1993) Vol. 61, No. 1, pp. 236-244.
ISSN: 0019-9567.
DT Article
LA English
AB Previous studies have demonstrated the serologic and T-cell immunogenicity for cattle of a recombinant form of the apical complex-associated 77-kDa merozite protein of Babesia bovis, designated Bb-1. The present study characterizes the immunogenic epitopes of the Bb-1 protein. A series of recombinant truncated fusion proteins spanning the majorty of the Bb-1 protein were expressed in Escherichia coli, and their reactivities with bovine peripheral blood mononuclear cells and T-cell clones derived from B. bovis-immune cattle and with rabbit antibodies were determined. Lymphocytes from two immune cattle were preferentially stimulated by the N-terminal half of the Bb-1 protein (amino acids 23 to 266, termed Bb-1A), localizing the T-cell epitopes to the Bb-1A portion of the molecule. CD4+

T-cell clones derived by stimulation with the intact Bb-1 fusion protein were used to identify two T-cell epitopes in the Bb-1A protein, consisting of amino acis SVVLLSAFSGN VWANEAEVSQVVK and FSDVDKTKSTEKT (residues 23 to 46 and 82 to 94). In contrast, rabbit antiserum raised against the intact fusion protein reacted only with the C-terminal half of the protein (amino acids 267 to 499, termed Bb-1B), which contained 28 tandem repeats of the tetrapeptide PAEK or PAET. Biological assays and Northern (RNA) blot analyses for cytokines revealed that following activation with concanavalin A, T-cell clones reactive against the two Bb-1A epitopes produced interleukin-2, gamma interferon, and tumor necrosis factors beta and alpha, but not interleukin-4, suggesting that the Bb-1 antigen preferentially stimulates the Th1 subset of CD4+ T cells in cattle. The studies described here report for the first time the characterization, by cytokine production, of the Th1 subset of bovine T cells and show that, as in mice, protozoal antigens can induce Th1 cells in ruminants. This first demonstration of B. bovis-encoded Th1 cell epitopes provides a rationale for incorporation of all or part of the Bb-1 protein into a recombinant vaccine.

L2 ANSWER 29 OF 34 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 11
AN 1994:77481 BIOSIS
DN PREV199497090481
TI The LD1 amplified element from Leishmania infantum encodes a homolog of ribosomal protein L37.
AU Myler, Peter J.; ***Tripp, Cynthia A.*** ; Thomas, Louise; Venkataraman, Gopalakrishnan M.; Merlin, Gilles; Stuart, Kenneth D. (1)
CS (1) Dep. Pathobiol., Univ. Wash., Seattle, WA USA
SO Molecular and Biochemical Parasitology, (1993) Vol. 62, No. 1, pp. 147-151.
ISSN: 0166-6851.
DT Article
LA English

L2 ANSWER 30 OF 34 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1993:219803 BIOSIS
DN PREV199344104303
TI Cloning and characterization of a major surface glycoprotein (Gp29) in Dirofilaria immitis.
AU Frank, Rexann S.; ***Tripp, Cynthia A.*** ; Selkirk, Murray E.; Grieve, Marcia M.; Grieve, Robert B.
CS Dep. Pathol., Colo. State Univ., Fort Collins, CO 80523 USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART C, pp. 107.
Meeting Info.: Keystone Symposium on Molecular Helminthology: An Integrated Approach Tamarron, Colorado, USA February 10-17, 1993
ISSN: 0733-1959.
DT Conference
LA English

L2 ANSWER 31 OF 34 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 12
AN 1993:51017 BIOSIS
DN PREV199395027319
TI A multicopy, extrachromosomal DNA in Leishmania infantum contains two inverted repeats of the 27.5-kilobase LD1 sequence and encodes numerous transcripts.

AU ***Tripp, Cynthia A.*** ; Wisdom, Wendy A.; Myler, Peter J.; Stuart, Kenneth D.
CS Seattle Biomedical Res. Inst., 4 Nickerson St., Seattle, Wash. 98109-1651
SO Molecular and Biochemical Parasitology, (1992) Vol. 55, No. 1-2, pp. 39-50.
ISSN: 0166-6851.
DT Article
LA English
AB Leishmania DNA 1 (LD1) is a 27.5-kb sequence that occurs as an inverted repeat in a 55-kb multicopy, circular DNA in Leishmania infantum ITMAP263. The sequence is also found with a different genomic organization, possibly a tandem array, within a 1.5-Mb chromosome in all Leishmania isolates. About 26 stable transcripts of LD1 sequence, ranging from 0.6 to 15 kb, are found in ITMAP263. Transcripts were detected from both strands of the entire LD1 sequence, but the inverted repeat nature of the circular molecule prevented determination of whether transcription proceeded in one or both directions. Nine abundant transcripts (0.6-8.4 kb) from adjacent regions on the same strand of the repeat unit may represent mature mRNAs. One of these transcripts was shown to contain the 39-nucleotide spliced leader sequence characteristic of the 5' termini of trypanosomatid mRNAs. Several transcripts from the other strand of the repeat unit are also abundant and contain sequence complementary to some of the putative mRNAs. Less abundant, larger transcripts that span sequences encoding abundant mRNAs are also present, suggesting that transcription of LD1 is polycistronic.

L2 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2000 ACS
AN 1991:600009 CAPLUS
DN 115:200009
TI A DNA sequence (LD1) which occurs in several genomic organizations in Leishmania
AU ***Tripp, Cynthia A.*** ; Myler, Peter J.; Stuart, Kenneth
CS Seattle Biomed. Res. Inst., Seattle, WA, 98109-1651, USA
SO Mol. Biochem. Parasitol. (1991), 47(2), 151-60
CODEN: MBIPDP; ISSN: 0166-6851
DT Journal
LA English
AB Leishmania DNA 1 (LD1) is a 27.5-kb sequence that occurs in all 91 stocks of 12 New and Old World Leishmania species examd.; related sequences are present in some other kinetoplastid species. LD1 has no homol. to several DNA sequences that are amplified in drug-resistant Leishmania. LD1 occurs in 3 different genomic organizations in Leishmaina, depending on the stock. It is present within large (1.5-2 megabase) chromosomes in all stocks, and 74 stocks contain only this form. In 12 other stocks, LD1 also occurs in smaller (<550 kb) chromosomes, some of which are multicopy. Five stocks contain LD1 in multicopy circular DNA mols. in addn. to the sequences found in the larger chromosome(s). Restriction fragment length polymorphisms of LD1 sequences correlate with taxonomic grouping, suggesting that LD1 is an endogenous sequence.

L2 ANSWER 33 OF 34 CAPLUS COPYRIGHT 2000 ACS
AN 1989:626389 CAPLUS
DN 111:226389
TI Babesia bovis: gene isolation and characterization using a mung bean nuclease-derived expression library

AU ***Tripp, Cynthia A.*** ; Wagner, G. Gale; Rice-Ficht, Allison C.
CS Dep. Vet. Microbiol. Parasitol., Texas A and M Univ., College Station, TX, 77843, USA
SO Exp. Parasitol. (1989), 69(3), 211-25
CODEN: EXPAAA; ISSN: 0014-4894
DT Journal
LA English
AB Genomic DNA prepd. from erythrocyte cultures of B. bovis merozoites was digested with mung bean nuclease and used to construct a .lambda.gt11 expression library of B. bovis recombinants. Immunoscreening with two polyclonal antibody probes detected multiple recombinants from which two, designated Bb-1 and Bb-3, were chosen for further anal. Monospecific Igs isolated from the screening sera using nitrocellulose-bound fusion proteins were employed to det. the native mol. wt. and the intracellular location of the babesial proteins encoded by the recombinants. Clone Bb-1 encodes an antigen of 77,000 Da located at the apical end of the intraerythrocytic parasite. A protein of 75,000 Da encoded by clone Bb-3 is assocd. with the infected red blood cell cytoplasm and/or membrane but not with the merozoite.

L2 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2000 ACS
AN 1988:584828 CAPLUS
DN 109:184828
TI Construction of a Babesia bovis expression library: isolation and characterization of clones encoding Babesia proteins
AU ***Tripp, Cynthia Ann***
CS Texas A and M Univ., College Station, TX, USA
SO (1987) 200 pp. Avail.: Univ. Microfilms Int., Order No. DA8802149
From: Diss. Abstr. Int. B 1988, 48(12), Pt. 1, 3502-3
DT Dissertation
LA English
AB Unavailable

=> e frank glenn/au

E1 1 FRANK GIUSE/AU
E2 1 FRANK GLASS L/AU
E3 2 --> FRANK GLENN/AU
E4 76 FRANK GLENN R/AU
E5 9 FRANK GLENN ROBERT/AU
E6 1 FRANK GLOCKNER/AU
E7 22 FRANK GLYNN H/AU
E8 1 FRANK GLYNN HENRY/AU
E9 1 FRANK GOERING/AU
E10 4 FRANK GOLLINSKI/AU
E11 1 FRANK GOMER S/AU
E12 9 FRANK GORAN/AU

=> s e3-e5

L3 87 ("FRANK GLENN"/AU OR "FRANK GLENN R"/AU OR "FRANK GLENN ROBERT"/AU)

=> dup rem l3

PROCESSING COMPLETED FOR L3
L4 60 DUP REM L3 (27 DUPLICATES REMOVED)

=> d bib ab 1-

YOU HAVE REQUESTED DATA FROM 60 ANSWERS - CONTINUE? Y/(N):y

L4 ANSWER 1 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 1
AN 2000:802342 CAPLUS
TI Flea protease proteins
IN Grieve, Robert B.; Rushlow, Keith E.; Hunter, Shirley Wu; ***Frank,*** *** Glenn R.*** ; Stiegler, Gary L.
PA Heska Corporation, USA
SO U.S., 64 pp., Cont.-in-part of U.S. 5,766,609.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6146870	A	20001114	US 1995-485443	19950607
US 5356622	A	19941018	US 1991-806482	19911213
AU 9332470	A1	19930719	AU 1993-32470	19921210
US 5766609	A	19980616	US 1994-326773	19941018
CA 2202622	AA	19960425	CA 1995-2202622	19951018
WO 9611706	A1	19960425	WO 1995-US14442	19951018
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9641038	A1	19960506	AU 1996-41038	19951018
AU 705715	B2	19990527		
EP 787014	A1	19970806	EP 1995-939081	19951018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10507455	T2	19980721	JP 1995-513499	19951018
US 6077687	A	20000620	US 1997-906769	19970805
US 6121035	A	20000919	US 1997-906616	19970805

PRAI US 1991-806482 19911213
US 1994-326773 19941018
WO 1992-US10671 19921210
US 1995-482130 19950607
US 1995-484211 19950607
US 1995-485443 19950607
US 1995-485455 19950607
WO 1995-US14442 19951018
US 1996-639075 19960424

AB The present invention relates to flea serine protease and aminopeptidase proteins; to flea serine protease and aminopeptidase nucleic acid mols., including those that encode such proteins; to antibodies raised against such proteins; and to compds. that inhibit flea serine protease and/or aminopeptidase activities. The present invention also includes methods to

obtain such proteins, nucleic acid mols., antibodies, and inhibitors. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., antibodies, and/or inhibitors as well as the use of such therapeutic compns. to protect a host animal from flea infestation.

L4 ANSWER 2 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 2
AN 2000:623706 CAPLUS
DN 133:220511
TI A 39 kilodalton antigen common to parasitic helminths, cDNAs encoding them and the development of vaccines
IN Grieve, Robert B.; ***Frank, Glenn R.*** ; Smika-grieve, Marcia; Tripp, Cynthia Ann
PA Heska Corp., USA; Colorado State Universtiy Research Foundation
SO U.S., 52 pp., Cont.-in-part of U.S. Ser. No. 3,389, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6114142	A	20000905	US 1995-473034	19950606
WO 9415593	A1	19940721	WO 1994-US679	19940112

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

PRAI US 1991-654226 19910212
US 1993-3389 19930112
US 1993-101283 19930803
WO 1994-US679 19940112
US 1993-3257 19930112
US 1993-109391 19930819

AB An antigen common to a no. of parasitic helminths that is a protein of about 39 kD (i.e., P39 proteins) that may be of use in the development of vaccines against these parasites is identified and cDNAs encoding it are cloned and expressed. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., and/or antibodies as well as the use of such therapeutic compns. to protect animals from diseases caused by parasitic helminths. The antigens recognized by dog immune serum to Dirofilaria immitis were identified by std. Western blots and the corresponding cDNAs cloned by antibody screening of expression libraries. Expression of the gene to generate a protein recognized by immune serum using Escherichia coli and in eukaryotic cells using Sindbis virus vectors is demonstrated.
RE.CNT 58
RE
(6) Amiri; Mol Biochem Parasitol 1988, V28, P113 CAPLUS
(8) Anon; WO 9213560 1992 CAPLUS
(10) Bianco; Mol Biochem Parasitol 1990, V39, P203 CAPLUS
(13) Chomczynski; Anal Biochem 1987, V162, P156 CAPLUS
(15) Culpepper; Mol Biochem Parasitol 1992, V54, P51 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 3
AN 2000:547369 CAPLUS
DN 133:163025
TI Parasitic helminth PLA2 proteins
IN Grieve, Robert B.; ***Frank, Glenn R.*** ; Wisnewski, Nancy
PA Heska Corporation, USA; Colorado State University Research Foundation
SO U.S., 63 pp., Cont.-in-part of U.S. 5,804,200.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6099843	A	20000808	US 1995-483474	19950607
US 5639876	A	19970617	US 1993-109391	19930819
WO 9415593	A1	19940721	WO 1994-US679	19940112
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5804200	A	19980908	US 1995-408120	19950320

PRAI US 1991-654226 19910212
US 1993-3257 19930112
US 1993-3389 19930112
US 1993-101283 19930803
US 1993-109391 19930819
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320

AB The present invention relates to parasitic helminth PLA2 proteins; to parasitic helminth PLA2 nucleic acid mols., including those that encode such proteins; to antibodies raised against such proteins; and to compds. that inhibit parasitic helminth phospholipase A2 activity. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies, and inhibitors. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., antibodies, and/or inhibitors as well as the use of such therapeutic compns. to protect animals from diseases caused by parasitic helminths.

RE.CNT 69
RE
(5) Amiri; Mol Biochem Pharasitol 1988, V28, P113 CAPLUS
(7) Anon; WO 9003433 1990 CAPLUS
(8) Anon; EP 0571911 1993 CAPLUS
(9) Anon; WO 9323542 1993 CAPLUS
(11) Bianco; Mol Biochem Parasitol 1990, V39, P203 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 4
AN 2000:307114 CAPLUS
DN 132:331145
TI Parasitic helminth phospholipase A2-like (PLA2) proteins, cDNAs, and recombinant virus vaccines for heartworm infection.
IN Fgrieve, Robert B.; ***Frank, Glenn R.*** ; Wisnewski, Nancy
PA Heska Corporation, USA

SO U.S., 62 pp., Cont.-in-part of U.S. 5,804,200.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6060281	A	20000509	US 1995-482304	19950607
WO 9415593	A1	19940721	WO 1994-US679	19940112

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 5804200	A	19980908	US 1995-408120	19950320

PRAI US 1991-654226 19910212
US 1993-3257 19930112
US 1993-101283 19930803
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320
US 1993-3389 19930112
US 1993-109391 19930819

AB The present invention relates to parasitic helminth PLA2 proteins and nucleic acid mols. encoding such proteins. In particular, the nucleic acid mols. encoding proteins selectively binding to immune serum from animals infected by Dirofilaria immitis, or animals immunized with Dirofilaria immitis third stage or fourth stage larvae, are claimed. The present invention also includes methods and compns. to obtain such proteins, including recombinant viruses and cells. Several antigenic proteins that selectively bind to serum from dogs immune to heartworm infection were identified. Proteins of 22 and 20.5 kDa, designated P22U, P22L, and P20.5, present in L3 and L4 stages of D. immitis were purified. CDNAs encoding these proteins were cloned and sequenced. The deduced amino acid sequences of these proteins revealed similarities to snake and mammalian PLA2 sequences. The recombinant P22L protein expressed in E. coli selectively bound to immune serum and induced the prodn. of antibodies in rabbits and dogs capable of recognizing the corresponding native and recombinant heartworm antigens. Recombinant virus vaccines expressing D. immitis PLA2 protein protected cats from heartworm infection. Corresponding PLA2 proteins and cDNAs were obtained from Onchocerca volvulus and Brugia malayi.

RE.CNT 23
RE
(5) Amiri; Mol Biochem Parasitol 1988, V28, P113 CAPLUS
(7) Anon; WO 9003433 1990 CAPLUS
(9) Bianco; Mol Biochem Parasitol 1990, V39, P203 CAPLUS
(13) Chomczynski; Anal Biochem 1987, V162, P156 CAPLUS
(15) Culpepper; Mol Biochem Parasitol 1992, V54, P51 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 60 USPATFULL
AN 2000:157179 USPATFULL
TI Flea protease proteins and uses thereof
IN Grieve, Robert B., Windsor, CO, United States

Rushlow, Keith E., Ft. Collins, CO, United States
Hunter, Shirley Wu, Ft. Collins, CO, United States
Frank, Glenn R. , Wellington, CO, United States
Stiegler, Gary L., Ft. Collins, CO, United States
Gaines, Patrick J., Ft. Collins, CO, United States
Silver, Gary, Ft. Collins, CO, United States
PA Heska Corporation, Ft.Collins, CO, United States (U.S. corporation)
PI US 6150125 20001121
AI US 1996-639075 19960424 (8)
RLI Continuation-in-part of Ser. No. US 1995-484211, filed on 7 Jun 1995, now patented, Pat. No. US 5972645, issued on 26 Oct 1999 And a continuation-in-part of Ser. No. US 1995-482130, filed on 7 Jun 1995, now patented, Pat. No. US 5962257, issued on 5 Oct 1999 And a continuation-in-part of Ser. No. US 1998-485443, filed on 7 Jun 1998 And a continuation-in-part of Ser. No. US 1995-485455, filed on 7 Jun 1995, now patented, Pat. No. US 5712143, issued on 27 Jan 1998 which is a continuation-in-part of Ser. No. US 1994-326773, filed on 18 Oct 1994, now patented, Pat. No. US 5766609, issued on 16 Jun 1998 which is a continuation-in-part of Ser. No. US 1991-806482, filed on 13 Dec 1991, now patented, Pat. No. US 5356622, issued on 18 Oct 1994
DT Utility
EXNAM Primary Examiner: Allen, Marianne P.
LREP Sheridan Ross, P.C.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 9114
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to flea serine protease proteins, aminopeptidase proteins and flea cysteine protease proteins; to flea serine protease, aminopeptidase and cysteine protease nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit flea serine protease, aminopeptidase and/or cysteine protease activities. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect a host animal from flea infestation.

L4 ANSWER 6 OF 60 USPATFULL
AN 2000:145886 USPATFULL
TI Methods of eliciting an antibody response using flea protease proteins and homologs thereof
IN Grieve, Robert B., Ft. Collins, CO, United States
Rushlow, Keith E., Ft. Collins, CO, United States
Hunter, Shirley W., Ft. Collins, CO, United States
Frank, Glenn R. , Wellington, CO, United States
Stiegler, Gary L., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6139840 20001031
WO 9611706 19960425
AI US 1997-817795 19970801 (8)
WO 1995-US14442 19951018
19970801 PCT 371 date

19970801 PCT 102(e) date
DT Utility
EXNAM Primary Examiner: Allen, Marianne P.
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 5533
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to flea serine protease and aminopeptidase proteins; to flea serine protease and aminopeptidase nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit flea serine protease and/or aminopeptdiase activities. The present invention also includes methods to obtain such proteins, nucleic acid moelcules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect a host animal from flea infestation.

L4 ANSWER 7 OF 60 USPATFULL
AN 2000:124813 USPATFULL
TI Flea aminopeptidase proteins and uses thereof
IN Grieve, Robert B., Ft. Collins, CO, United States
Rushlow, Keith E., Ft. Collins, CO, United States
Hunter, Shirley Wu, Ft. Collins, CO, United States
Frank, Glenn R. , Wellington, CO, United States
Stiegler, Gary L., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6121035 20000919
AI US 1997-906616 19970805 (8)
RLI Division of Ser. No. US 1996-639075, filed on 24 Apr 1996 which is a continuation-in-part of Ser. No. US 1995-484211, filed on 7 Jun 1995, now patented, Pat. No. US 5972645 And a continuation-in-part of Ser. No. US 1995-482130, filed on 7 Jun 1995, now patented, Pat. No. US 5962257 And a continuation-in-part of Ser. No. US 1995-485443, filed on 7 Jun 1995 And a continuation-in-part of Ser. No. US 1995-485455, filed on 7 Jun 1995, now patented, Pat. No. US 5712143 , said Ser. No. US 484211 , said Ser. No. US 482130 , said Ser. No. US 485443 which is a continuation-in-part of Ser. No. US 1994-326773, filed on 18 Oct 1994, now patented, Pat. No. US 5766609 which is a continuation-in-part of Ser. No. US 1991-806482, filed on 13 Dec 1991, now patented, Pat. No. US 5356622 , said Ser. No. US 1996-639075, filed on 24 Apr 1996 which is a continuation-in-part of Ser. No. US 1994-326773, filed on 18 Oct 1994, now patented, Pat. No. US 5766609 And a continuation-in-part of Ser. No. WO 1995-US14442, filed on 18 Oct 1995
DT Utility
EXNAM Primary Examiner: Allen, Marianne P.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 8902
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to flea serine protease proteins, aminopeptidase proteins and flea cysteine protease proteins; to flea

serine protease, aminopeptidase and cysteine protease nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit flea serine protease, aminopeptidase and/or cysteine protease activities. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect a host animal from flea infestation.

L4 ANSWER 8 OF 60 USPATFULL
AN 2000:105679 USPATFULL
TI Feline Fc epsilon receptor alpha chain nucleic acid molecules, and uses thereof
IN ***Frank, Glenn R.*** , Wellington, CO, United States
Porter, James P., Fort Collins, CO, United States
Rushlow, Keith E., Fort Collins, CO, United States
Wassom, Donald L., Fort Collins, CO, United States
Weber, Eric R., Fort Collins, CO, United States
PA Heska Corporation, Fort Collins, CO, United States (U.S. corporation)
PI US 6103494 20000815
AI US 1998-5299 19980109 (9)
RLI Division of Ser. No. US 1996-768964, filed on 19 Dec 1996, now patented, Pat. No. US 5958880
DT Utility
EXNAM Primary Examiner: Mertz, Prema; Assistant Examiner: Hamud, Fozia
LREP Heska Corporation
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2779
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to feline Fc epsilon receptor alpha chain nucleic acid molecules, proteins encoded by such nucleic acid molecules, antibodies raised against such proteins, and inhibitors of such proteins. The present invention also includes methods to detect IgE using such proteins and antibodies. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies and/or inhibitory compounds as well as the use of such therapeutic compositions to mediate Fc epsilon receptor-mediated biological responses.

L4 ANSWER 9 OF 60 USPATFULL
AN 2000:102422 USPATFULL
TI Parasitic helminth p22U nucleic acid molecules
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn Robert , Ft. Collins, CO, United States
Grieve, Robert B., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6100390 20000808
AI US 1995-458860 19950602 (8)
RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation of Ser. No. US

1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. Ser. No. US 1993-3389, filed on 12 Jan 1993 And Ser. No. US 1991-654226, filed on 12 Feb 1991 , said Ser. No. US 3257 And Ser. No. US 3389 which is a continuation-in-part of Ser. No. US 654226

DT Utility

EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Swartz, Rodney P.

LREP Sheridan Ross P.C.

CLMN Number of Claims: 11

ECL Exemplary Claim: 1

DRWN 2 Drawing Figure(s); 2 Drawing Page(s)

LN.CNT 2469

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to isolated parasitic helminth nucleic acid sequences capable of hybridizing, under stringent conditions, to at least a portion of D. immitis nucleic acid sequence p4 and/or to at least a portion of D. immitis nucleic acid sequence p22U; to isolated parasitic helminth proteins that are encoded by such parasitic helminth nucleic acid sequences and that are capable of selectively binding to at least one component of immune serum capable of inhibiting helminth development; and to antibodies raised against such isolated parasitic helminth proteins. The present invention also relates to therapeutic compositions comprising such isolated nucleic acid sequences, proteins and/or antibodies. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compositions capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L4 ANSWER 10 OF 60 USPATFULL

AN 2000:77203 USPATFULL

TI Flea aminopeptidase nucleic acid molecules and uses thereof

IN Grieve, Robert B., Windsor, CO, United States
Rushlow, Keith E., Ft. Collins, CO, United States
Hunter, Shirley Wu, Ft. Collins, CO, United States
Frank, Glenn R. , Wellington, CO, United States
Stiegler, Gary L., Ft. Collins, CO, United States
Gaines, Patrick J., Ft. Collins, CO, United States

PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)

PI US 6077687 20000620

AI US 1997-906769 19970805 (8)

RLI Division of Ser. No. US 1996-639075, filed on 24 Apr 1996 which is a continuation-in-part of Ser. No. US 1995-484211, filed on 7 Jun 1995, now patented, Pat. No. US 5922645 which is a continuation-in-part of Ser. No. US 1995-482130, filed on 7 Jun 1995, now patented, Pat. No. US 5962257 And a continuation-in-part of Ser. No. US 1995-485455, filed on 7 Jun 1995, now patented, Pat. No. US 5712143, issued on 27 Jan 1998 which is a continuation-in-part of Ser. No. US 1994-326773, filed on 18 Oct 1994, now patented, Pat. No. US 5766609, issued on 16 Jun 1998 which is a continuation-in-part of Ser. No. US 1991-806482, filed on 13 Dec 1991, now patented, Pat. No. US 5356622, issued on 18 Oct 1994 And a continuation-in-part of Ser. No. WO 1995-US14442, filed on 18 Oct 1995 which is a continuation-in-part of Ser. No. US 1995-485443, filed on 7 Jun 1995

DT Utility

EXNAM Primary Examiner: Allen, Marianne P.

LREP Sheridan Ross P.C.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 7742
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to flea serine protease proteins, aminopeptidase proteins and flea cysteine protease proteins; to flea serine protease, aminopeptidase and cysteine protease nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit flea serine protease, aminopeptidase and/or cysteine protease activities. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect a host animal from flea infestation.

L4 ANSWER 11 OF 60 USPATFULL
AN 2000:57620 USPATFULL
TI Method to detect canine IgE and kit therefor
IN ***Frank, Glenn R.*** , Wellington, CO, United States
Rushlow, Keith E., Fort Collins, CO, United States
PA Heska Corporation, Fort Collins, CO, United States (U.S. corporation)
PI US 6060326 20000509
AI US 1997-833488 19970407 (8)
DT Utility
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Gabel, Gailene R.
LREP Heska Corporation
CLMN Number of Claims: 38
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2232
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention includes a method to detect canine IgE using a canine Fc epsilon receptor (Fc.sub..epsilon. R) to detect canine IgE antibodies in a biological sample from a canid. The present invention also relates to kits to perform such methods.

L4 ANSWER 12 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 5
AN 2000:291945 BIOSIS
DN PREV200000291945
TI Parasitic helminth P39 proteins, and uses thereof.
AU Grieve, Robert B. (1); ***Frank, Glenn R.*** ; Mika-Grieve, Marci; Tripp, Cynthia Ann
CS (1) Ft. Collins, CO USA
ASSIGNEE: Heska Corporation, Ft. Collins, CO, USA; Colorado State University Research Foundation, Ft. Collins, CO, USA
PI US 5977306 November 02, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 2, 1999) Vol. 1228, No. 1, pp. No pagination. e-file..
ISSN: 0098-1133.
DT Patent
LA English

AB The present invention relates to parasitic helminth proteins of about 39 kD (i.e., P39 proteins); to parasitic helminth P39 nucleic acid molecules, including those that encode such proteins; and to antibodies raised against such proteins. The present invention also includes methods to obtain such proteins, nucleic acid molecules, and antibodies. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, and/or antibodies as well as the use of such therapeutic compositions to protect animals from diseases caused by parasitic helminths.

L4 ANSWER 13 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 6
AN 2000:278407 BIOSIS
DN PREV200000278407
TI Flea serine protease nucleic acid molecules.
AU Grieve, Robert B. (1); Rushlow, Keith E.; Hunter, Shirley Wu; ***Frank,*** *** Glenn R.*** ; Stiegler, Gary L.
CS (1) Ft. Collins, CO USA
ASSIGNEE: Heska Corporation, Ft. Collins, CO, USA
PI US 5972645 October 26, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Oct. 26, 1999) Vol. 1227, No. 4, pp. No pagination. e-file..
ISSN: 0098-1133.
DT Patent
LA English
AB The present invention relates to flea serine protease and aminopeptidase proteins; to flea serine protease and aminopeptidase nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit flea serine protease and/or aminopeptidase activities. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect a host animal from flea infestation.

L4 ANSWER 14 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 7
AN 2000:10772 BIOSIS
DN PREV200000010772
TI Feline Fc epsilon receptor alpha chain proteins and therapeutic uses thereof.
AU ***Frank, Glenn R. (1)*** ; Porter, James P.; Rushlow, Keith E.; Wassom, Donald L.; Weber, Eric R.
CS (1) Wellington, CO USA
ASSIGNEE: Heska Corporation
PI US 5958880 Sep. 28, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Sep. 28, 1999) Vol. 1226, No. 4, pp. No pagination.
ISSN: 0098-1133.
DT Patent
LA English

L4 ANSWER 15 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 8
AN 1999:510766 BIOSIS
DN PREV199900510766
TI Method to detect IgE.

AU ***Frank, Glenn R. (1)*** ; Porter, James P.; Rushlow, Keith E.;
Wassom, Donald L.
CS (1) Wellington, CO USA
ASSIGNEE: Heska Corporation
PI US 5945294 Aug. 31, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents,
(Aug. 31, 1999) Vol. 1225, No. 5, pp. NO PAGINATION.
ISSN: 0098-1133.
DT Patent
LA English

L4 ANSWER 16 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 9
AN 1999:462678 BIOSIS
DN PREV199900462678
TI Ectoparasite saliva proteins and apparatus to collect such proteins.
AU ***Frank, Glenn R. (1)*** ; Hunter, Shirley Wu; Wallenfels, Lynda
CS (1) Wellington, CO USA
ASSIGNEE: Heska Corporation
PI US 5932470 Aug. 03, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents,
(Aug. 3, 1999) Vol. 1225, No. 1, pp. NO PAGINATION.
ISSN: 0098-1133.
DT Patent
LA English

L4 ANSWER 17 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 10
AN 1999:437505 BIOSIS
DN PREV199900437505
TI Ectoparasite saliva proteins and apparatus to collect such proteins.
AU ***Frank, Glenn R. (1)*** ; Hunter, Shirley Wu; Wallenfels, Lynda
CS (1) Wellington, CO USA
ASSIGNEE: Heska Corporation
PI US 5927230 Jul. 27, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents,
(Jul. 27, 1999) Vol. 1224, No. 4, pp. NO PAGINATION.
ISSN: 0098-1133.
DT Patent
LA English

L4 ANSWER 18 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 11
AN 1999:385879 BIOSIS
DN PREV199900385879
TI Parasitic helminth p22U proteins.
AU Tripp, Cynthia Ann (1); ***Frank, Glenn Robert*** ; Grieve, Robert B.
CS (1) Department of Exercise and Sport Science, Colorado State University,
Ft. Collins, CO USA
ASSIGNEE: Colorado State University Research Foundation
PI US 5912337 Jun. 15, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents,
(Jun.15, 1999) Vol. 1223, No. 3, pp. NO PAGINATION.
ISSN: 0098-1133.
DT Patent
LA English

L4 ANSWER 19 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 12

AN 1999:633275 CAPLUS
DN 131:267972
TI Protein and cDNA sequences of flea midgut serine proteases and leucine aminopeptidases, and uses of inhibitors thereof in reducing flea infestation of animals
IN Grieve, Robert B.; Rushlow, Keith E.; Hunter, Shirley Wu; ***Frank,*** *** Glenn R.*** ; Stiegler, Gary L.
PA Heska Corporation, USA
SO U.S., 65 pp., Cont.-in-part of U.S. 5,766,609.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5962257	A	19991005	US 1995-482130	19950607
US 5356622	A	19941018	US 1991-806482	19911213
AU 9332470	A1	19930719	AU 1993-32470	19921210
US 5766609	A	19980616	US 1994-326773	19941018
CA 2202622	AA	19960425	CA 1995-2202622	19951018
WO 9611706	A1	19960425	WO 1995-US14442	19951018
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9641038	A1	19960506	AU 1996-41038	19951018
AU 705715	B2	19990527		
EP 787014	A1	19970806	EP 1995-939081	19951018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10507455	T2	19980721	JP 1995-513499	19951018
US 6150125	A	20001121	US 1996-639075	19960424
US 6077687	A	20000620	US 1997-906769	19970805
US 6121035	A	20000919	US 1997-906616	19970805

PRAI US 1991-806482 19911213
US 1994-326773 19941018
WO 1992-US10671 19921210
US 1995-482130 19950607
US 1995-484211 19950607
US 1995-485443 19950607
US 1995-485455 19950607
WO 1995-US14442 19951018
US 1996-639075 19960424
US 1998-485443 19980607

AB The invention provides protein and cDNA sequences of novel serine proteases and leucine aminopeptidases which were isolated from the midgut of fleas. The invention is particularly concerned with a leucine aminopeptidase (LAP) that is 151 amino acids in length and has 32% identity with the bovine lens LAP. In certain embodiments, the invention relates to the use of compds. that inhibit the novel flea proteases and aminopeptidases to reduce flea infestation of animals.

RE.CNT 50
RE

(1) Anon; WO 9003433 1990 CAPLUS
(5) Borovsky; Arch Insect Biochem Physiol 1988, V7, P187 CAPLUS
(6) Borovsky; FASEB J 1990, V4, P3015 CAPLUS
(7) Casu; Insect Mol Biol 1994, V3(3), P159 CAPLUS
(8) Casu; Insect Mol Biol 1994, V3(4), P201 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 13
AN 1999:194042 BIOSIS
DN PREV199900194042
TI Molecular cloning of the 22-24 kDa excretory-secretory 22U protein of Dirofilaria immitis and other filarial nematode parasites.
AU ***Frank, Glenn R. (1)*** ; Wisnewski, Nancy; Brandt, Kevin S.; Carter, Clive R. D.; Jennings, Nicola S.; Selkirk, Murray E.
CS (1) Heska Corporation, 1825 Sharp Point Drive, Fort Collins, CO, 80525 USA
SO Molecular and Biochemical Parasitology, (Jan. 25, 1999) Vol. 98, No. 2, pp. 297-302.
ISSN: 0166-6851.
DT Article
LA English

L4 ANSWER 21 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 14
AN 1998:774214 CAPLUS
DN 130:24101
TI Ectoparasite saliva proteins, cDNA sequences, apparatus to collect such proteins, and allergic dermatitis treatment
IN ***Frank, Glenn R.*** ; Hunter, Shirley Wu; Wallenels, Lynda
PA Heska Corporation, USA
SO U.S., 111 pp., Cont.-in-part of U.S. 5,795,862.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5840695	A	19981124	US 1996-630822	19960410
US 5646115	A	19970708	US 1994-319590	19941007
US 5795862	A	19980818	US 1995-487001	19950607
CA 2250835	AA	19971016	CA 1997-2250835	19970410
WO 9737676	A1	19971016	WO 1997-US5959	19970410
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9724531	A1	19971029	AU 1997-24531	19970410
AU 719742	B2	20000518		
EP 939642	A1	19990908	EP 1997-920304	19970410
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2000509972	T2	20000808	JP 1997-536499	19970410
US 5932470	A	19990803	US 1998-5069	19980108

PRAI US 1994-319590 19941007
US 1995-487001 19950607
US 1995-487608 19950607
WO 1995-US13200 19951006
US 1996-630822 19960410
WO 1997-US5959 19970410

AB The present invention is directed to a novel product and method for isolating ectoparasite saliva proteins, and a novel product and method for detecting and/or treating allergic dermatitis in an animal. The present invention includes a saliva protein collection app. capable of collecting ectoparasite saliva proteins substantially free of contaminating material. The present invention also relates to ectoparasite saliva proteins, nucleic acid mols. having sequences that encode such proteins, and antibodies raised against such proteins. The present invention also includes methods to obtain such proteins and to use such proteins to identify animals susceptible to or having allergic dermatitis. The present invention also includes therapeutic compns. comprising such proteins and their use to treat animals susceptible to or having allergic dermatitis.

RE.CNT 7

RE

(1) Anon; WO 93/18788 1993 CAPLUS

(2) Baker; J Small Anim Pract 1975, V16(5), P317 MEDLINE

(3) Greene; Vet Immunol & Immunopathol 1993, V37(1), P15 CAPLUS

(4) Halliwell; Vet Immunol & Immunopath 1985, V8(3), P215 MEDLINE

(7) McKeon; Int J Parasitol 1994, V24(2), P259 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 22 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 15

AN 1998:564191 CAPLUS

DN 129:188358

TI Ectoparasite saliva proteins and apparatus to collect such proteins

IN ***Frank, Glenn R.*** ; Hunter, Shirley Wu; Wallenfels, Lynda

PA Heska Corp., USA

SO U.S., 66 pp. Cont.-in-part of U. S. 5,646,115.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5795862	A	19980818	US 1995-487001	19950607
US 5646115	A	19970708	US 1994-319590	19941007
CA 2201482	AA	19960418	CA 1995-2201482	19951006
WO 9611271	A1	19960418	WO 1995-US13200	19951006
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9538951	A1	19960502	AU 1995-38951	19951006
AU 703794	B2	19990401		
ZA 9508469	A	19960513	ZA 1995-8469	19951006

EP 784682 A1 19970723 EP 1995-938243 19951006
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
JP 10508467 T2 19980825 JP 1995-512718 19951006
US 5840695 A 19981124 US 1996-630822 19960410
US 5932470 A 19990803 US 1998-5069 19980108
PRAI US 1994-319590 19941007
US 1995-487001 19950607
US 1995-487608 19950607
WO 1995-US13200 19951006
US 1996-630822 19960410
AB The present invention is directed to a novel product and method for isolating ectoparasite saliva proteins, and a novel product and method for detecting and/or treating allergic dermatitis in an animal. The present invention includes a saliva protein collection app. capable of collecting ectoparasite saliva proteins substantially free of contaminating material. The present invention also relates to ectoparasite saliva proteins, nucleic acid mols. having sequences that encode such proteins, and antibodies raised against such proteins. The present invention also includes methods to obtain such proteins and to use such proteins to identify animals susceptible to or having allergic dermatitis. The present invention also includes therapeutic compns. comprising such proteins and their use to treat animals susceptible to or having allergic dermatitis.

L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 16
AN 1998:564165 CAPLUS
DN 129:198889
TI Filariid nematode cysteine protease proteins, nucleic acid molecules and their uses to treat infection
IN Tripp, Cynthia Ann; Wisnewski, Nancy; Grieve, Robert B.; ***Frank, Glenn*** *** R.***
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 22 pp. Cont.-in-part of U. S. Ser. No. 153,554, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5795768	A	19980818	US 1995-486036	19950607
CA 2224184	AA	19961219	CA 1996-2224184	19960607
WO 9640884	A1	19961219	WO 1996-US9848	19960607
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
AU 9661678	A1	19961230	AU 1996-61678	19960607
AU 713837	B2	19991209		
EP 846165	A1	19980610	EP 1996-919309	19960607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT				
JP 11507820	T2	19990713	JP 1996-502047	19960607

PRAI US 1991-654226 19910212
US 1991-792209 19911112

US 1993-101283 19930803
US 1993-153554 19931116
US 1995-486036 19950607
WO 1996-US9848 19960607

AB The present invention provides for filariid nematode cysteine protease proteins; to filariid nematode cysteine protease nucleic acid mols., in particular, Dirofilaria immitis L3 larval cysteine protease nucleic acid mols. and Onchocerca volvulus L3 larval cysteine protease nucleic acid mols.; to antibodies raised against such proteins, and to compds. that inhibit filariid nematode cysteine protease activity. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies and/or inhibitors. The present invention also includes therapeutic compns. comprising such proteins, nucleic acid mols., antibodies and/or inhibitors, and the use of such compns. to protect an animal from disease caused by parasitic helminths.

L4 ANSWER 24 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 17
AN 1998:545389 CAPLUS
DN 129:172447
TI Dirofilaria and onchocerca larval l3 cysteine protease proteins and uses thereof
IN Tripp, Cynthia Ann; Wisnewski, Nancy; Grieve, Robert B.; ***Frank, Glenn*** *** R.*** ; Richer, Jennifer K.
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 22 pp. Cont.-in-part of U. S. Ser. No. 153,554, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5792624	A	19980811	US 1995-482282	19950607

PRAI US 1991-654226 19910212
US 1991-792209 19911112
US 1993-101283 19930803
US 1993-153554 19931116

AB The present invention describes filariid nematode cysteine protease proteins and their genes from Dirofilaria immitis and Onchocerca volvulus. Antibodies raised against cystein protease proteins and compds. that inhibit filariid nematode cysteine protease activity are described. Therapeutic compns. and methods to obtain such proteins, nucleic acid mols., antibodies and/or inhibitors are also described. The use of such compns. to protect an animal from heartworm disease caused by parasitic helminths is relayed.

L4 ANSWER 25 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 18
AN 1998:414630 CAPLUS
DN 129:72222
TI Use of protease inhibitors and protease vaccines to protect animals from flea infestation
IN Grieve, Robert B.; Rushlow, Keith E.; Hunter, Shirley Wu; ***Frank,*** *** Glenn R.*** ; Heath, Andrew; Yamanaka, Miles; Arfsten, Ann; Dale, Beverly
PA Heska Corporation, USA
SO U.S., 27 pp. Cont.-in-part of U.S. 5,356,622.
CODEN: USXXAM

DT Patent
LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5766609	A	19980616	US 1994-326773	19941018
US 5356622	A	19941018	US 1991-806482	19911213
WO 9311790	A1	19930624	WO 1992-US10671	19921210
W: AU, JP, NZ				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9332470	A1	19930719	AU 1993-32470	19921210
US 5712143	A	19980127	US 1995-485455	19950607
US 5962257	A	19991005	US 1995-482130	19950607
US 5972645	A	19991026	US 1995-484211	19950607
US 6146870	A	20001114	US 1995-485443	19950607
CA 2202622	AA	19960425	CA 1995-2202622	19951018
WO 9611706	A1	19960425	WO 1995-US14442	19951018
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9641038	A1	19960506	AU 1996-41038	19951018
AU 705715	B2	19990527		
ZA 9508804	A	19960613	ZA 1995-8804	19951018
EP 787014	A1	19970806	EP 1995-939081	19951018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10507455	T2	19980721	JP 1995-513499	19951018
US 6150125	A	20001121	US 1996-639075	19960424
US 6077687	A	20000620	US 1997-906769	19970805
US 6121035	A	20000919	US 1997-906616	19970805

PRAI US 1991-806482 19911213
WO 1992-US10671 19921210
US 1994-326773 19941018
US 1995-482130 19950607
US 1995-484211 19950607
US 1995-485443 19950607
US 1995-485455 19950607
WO 1995-US14442 19951018
US 1996-639075 19960424
US 1998-485443 19980607

AB A method to protect a host animal from flea infestation by treating that animal with a compn. that includes a compd. that reduces protease activity of fleas feeding from the treated animal, thereby reducing flea burden on the animal and in the environment of the animal. The present invention also relates to compns. including flea protease vaccines, anti-flea protease antibodies and/or protease inhibitors. Also included in the present invention are sol. flea midgut prepns., flea protease proteins, nucleic acid mols. encoding such proteins and antibodies that selectively bind to such proteins. The present invention also includes methods to obtain and use such prepns., proteins, nucleic acid mols., antibodies and protease inhibitors to protect an animal from flea infestation.

L4 ANSWER 26 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 19
AN 1998:115346 CAPLUS
DN 128:151103
TI Proteinases of fleas and the genes encoding them and their use in protecting animals from flea infestation
IN Grieve, Robert B.; Rushlow, Keith E.; Hunter, Shirley Wu; ***Frank,*** *** Glenn R.*** ; Stiegler, Gary L.
PA Heska Corp., USA
SO U.S., 63 pp. Cont.-in-part of U.S. Ser. No. 326,773.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5712143	A	19980127	US 1995-485455	19950607
US 5356622	A	19941018	US 1991-806482	19911213
AU 9332470	A1	19930719	AU 1993-32470	19921210
US 5766609	A	19980616	US 1994-326773	19941018
CA 2202622	AA	19960425	CA 1995-2202622	19951018
WO 9611706	A1	19960425	WO 1995-US14442	19951018
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9641038	A1	19960506	AU 1996-41038	19951018
AU 705715	B2	19990527		
EP 787014	A1	19970806	EP 1995-939081	19951018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10507455	T2	19980721	JP 1995-513499	19951018
US 6150125	A	20001121	US 1996-639075	19960424
US 6077687	A	20000620	US 1997-906769	19970805
US 6121035	A	20000919	US 1997-906616	19970805

PRAI US 1991-806482 19911213
US 1994-326773 19941018
WO 1992-US10671 19921210
US 1995-482130 19950607
US 1995-484211 19950607
US 1995-485443 19950607
US 1995-485455 19950607
WO 1995-US14442 19951018
US 1996-639075 19960424
US 1998-485443 19980607

AB Serine proteinases and aminopeptidases from the midgut of fleas (Siphonaptera) are characterized and genes encoding them cloned. Antibodies against these proteinases and inhibitors for use in the control of flea infestation are described. The characterization of a no. of proteinases from the flea midgut is demonstrated. The serine proteinases were also the major proteinase of feces. Inhibitors of these proteinase lowered the fecundity of female fleas. The proteinases were also effectives as antigens in vaccines against fleas.

L4 ANSWER 27 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1998:685117 CAPLUS
DN 129:314987
TI Canine Fc epsilon receptor and allergen to detect canine IgE
IN ***Frank, Glenn Robert*** ; Rushlow, Keith E.
PA Heska Corporation, USA
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9845707	A1	19981015	WO 1998-US6774	19980406
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6060326	A	20000509	US 1997-833488	19970407
AU 9867964	A1	19981030	AU 1998-67964	19980406

PRAI US 1997-833488 19970407
WO 1998-US6774 19980406
AB The present invention includes a method to detect canine IgE using a canine Fc epsilon receptor (Fc.epsilon.R) to detect canine IgE antibodies in a biol. sample from a canine. A method comprises contacting immobilized allergen with sample to form allergen-IgE complexes, followed by contacting with immobilized Fc.epsilon.R for quantitating IgE and for diagnosing allergy. The allergen is derived from fungi, trees, weeds, shrubs, grasses, wheat, corn, soybean, rice, eggs, milk, cheese, bovine, poultry, swine, sheep, yeast, fleas, flies, mosquitos, mites, midges, biting gnats, lice, bees, wasps, ants, true bugs and ticks. The present invention also relates to kits to perform such methods.

L4 ANSWER 28 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1998:424343 CAPLUS
DN 129:94477
TI Feline Fc epsilon receptor alpha chain nucleic acids and proteins and diagnostic and therapeutic uses thereof
IN ***Frank, Glenn Robert*** ; Porter, James P.; Rushlow, Keith E.; Wassom, Donald L.; Weber, Eric R.
PA Heska Corp., USA
SO PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9827208	A1	19980625	WO 1997-US23244	19971216
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ,				

LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
US 5958880 A 19990928 US 1996-768964 19961219
AU 9853841 A1 19980715 AU 1998-53841 19971216
EP 950104 A1 19991020 EP 1997-950976 19971216
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
US 6103494 A 20000815 US 1998-5299 19980109
PRAI US 1996-768964 19961219
WO 1997-US23244 19971216
AB The present invention relates to feline Fc.epsilon. receptor .alpha. chain nucleic acid mols., proteins encoded by such nucleic acid mols., antibodies raised against such proteins, and inhibitors of such proteins. The present invention also includes methods to detect IgE using such proteins and antibodies. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., antibodies and/or inhibitory compds. as well as the use of such therapeutic compns. to mediate Fc.epsilon. receptor-mediated biol. responses.

L4 ANSWER 29 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1998:197685 CAPLUS
DN 128:281707
TI Method to detect Dirofilaria immitis infection
IN Grieve, Robert B.; ***Frank, Glenn R.*** ; Mondesire, Roy R.; Porter, James P.; Wisnewski, Nancy
PA Heska Corporation, USA
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9812563	A1	19980326	WO 1997-US16535	19970918

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
AU 9743537 A1 19980414 AU 1997-43537 19970918
EP 934529 A1 19990811 EP 1997-941677 19970918
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
PRAI US 1996-715628 19960918
WO 1997-US16535 19970918
AB The present invention includes a method to detect D. immitis infection in a host animal using a D. immitis Di33 protein to detect anti-D. immitis

Di33 antibodies in a bodily fluid of the animal. Also included is a method to detect D. immitis infection in a host animal using a D. immitis anti-Di33 protein to detect Di33 proteins in a bodily fluid of the animal. The present invention also relates to D. immitis detection kits that include either a Di33 protein or an anti-Di33 antibody; such kits also include a compn. to detect an immunocomplex between the anti-Di33 antibody and D. immitis Di33 protein. The present invention also includes Di33 proteins, nucleic acid mols. encoding such proteins, as well as recombinant mols. and recombinant cells comprising such nucleic acid mols., and anti-Di33 antibodies. Also included are methods to produce such proteins, nucleic acid mols. and antibodies.

L4 ANSWER 30 OF 60 USPATFULL
AN 1998:108039 USPATFULL
TI Parasitic nematode proteins and vaccines
IN Grieve, Robert B., La Porte, CO, United States
Frank, Glenn R. , Fort Collins, CO, United States
PA Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5804200 19980908
AI US 1995-408120 19950320 (8)
RLI Continuation of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned
DT Utility
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 71 Drawing Figure(s); 36 Drawing Page(s)
LN.CNT 2318
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Immunogens derived from proteins isolatable from the L3 and L4 larval stages of nematodes parasitic in mammals, and including a protein of about 20.5 kD, are disclosed. The proteins of the invention are identified using biological materials verified to destroy or impair the parasitic nematode in an in vivo incubator. Cells, serum or fractions thereof obtained from immune natural hosts are validated in a method wherein a recoverable implant of the parasitic nematodes is used to assess the protective effect when these materials are provided passively to the animal incubator.

L4 ANSWER 31 OF 60 USPATFULL
AN 1998:51474 USPATFULL
TI Filariid nematode cysteine protease proteins
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn R. , Ft. Collins, CO, United States
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5750391 19980512
AI US 1995-463989 19950605 (8)
RLI Continuation of Ser. No. US 1994-249552, filed on 26 May 1994, now abandoned
DT Utility

EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai
LREP Sheridan Ross P.C.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2683
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasite astacin metalloendopeptidase and filariid cysteine protease proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and compounds that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasites, such as heartworm.

L4 ANSWER 32 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 20
AN 1999:105593 BIOSIS
DN PREV199900105593
TI Antibody to the Dirofilaria immitis aspartyl protease inhibitor homologue is a diagnostic marker for feline heartworm infections.
AU ***Frank, Glenn R.*** ; Mondesire, Roy R.; Brandt, Kevin S.; Wisnewski, Nancy
CS Heska Corporation 1825 Sharp Point Drive, Fort Collins, CO 80525 USA
SO Journal of Parasitology, (Dec., 1998) Vol. 84, No. 6, pp. 1231-1236. ISSN: 0022-3395.
DT Article
LA English
AB Feline heartworm disease, caused by the filarial nematode Dirofilaria immitis, has been diagnosed with increased frequency in areas endemic for canine heartworm infection. The routine methods for determining the infection status of dogs, such as identification of circulating microfilariae in blood or identification of circulating antigen in serum, plasma or blood, have proven inadequate for screening cats. The inadequacies are due to the likelihood of single-sex infections and clinical disease during prepatent infections. Current antibody detection methodologies rely on crude or partially purified worm antigen preparations that may result in poor specificity. This report describes the cloning, expression, and diagnostic utility of the D. immitis homologue (PDi33) of the Onchocerca volvulus aspartyl protease inhibitor (Ov33). PDi33 is present in all stages that occur in the mammalian host (microfilariae, L3, L4, adult males, and females) and is released by adults cultured in vitro. An indirect enzyme-linked immunosorbent assay (ELISA) using antibody to recombinant PDi33 as a diagnostic marker for infection in cats was very sensitive and was useful for identifying prepatent infections. Testing of sera from cats infected with common gastrointestinal parasites also indicated excellent specificity. The same ELISA in dogs, although demonstrating reasonable sensitivity and specificity, appeared to be of less value as compared with the currently accepted antigen detection methodologies.

L4 ANSWER 33 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 21
AN 1998:165443 BIOSIS

DN PREV199800165443
TI Dirofilaria immitis: Molecular cloning and expression of a cDNA encoding a selenium-independent secreted glutathione peroxidase.
AU Tripp, Cindy (1); Frank, Rexann S.; Selkirk, Murray E.; Tang, Liang; Grieve, Marcia M.; ***Frank, Glenn R.*** ; Grieve, Robert B.
CS (1) Heska Corp., 1835 Sharp Point Dr., Fort Collins, CO 80525 USA
SO Experimental Parasitology, (Jan., 1998) Vol. 88, No. 1, pp. 43-50. ISSN: 0014-4894.
DT Article
LA English
AB A cDNA clone, Di29, encoding a homolog of glutathione peroxidase, was isolated from a Dirofilaria immitis adult female cDNA expression library by a combination of polymerase chain reaction amplification with primers designed from the Brugia pahangi glutathione peroxidase gene sequence and hybridization screening of D. immitis cDNA libraries. The Di29 nucleotide and deduced amino acid sequences were very similar to those described for lymphatic filariae and predicted a secreted form of glutathione peroxidase with a cysteine residue substituted for selenocysteine in the active site. The cDNA clone was expressed in Escherichia coli and Spodoptera frugiperda Sf9 insect cells, and the resulting recombinant proteins were purified for antibody production and assessment of enzymatic properties, respectively. An antiserum generated against the E. coli-expressed protein detected a protein of 29 kDa in D. immitis via immunoblotting. This protein is expressed in adult worms (both sexes) and fourth stage larvae generated via 6 days of in vitro culture, but was undetectable in microfilariae, and third stage larvae obtained either directly from mosquitoes or following 2 days of culture. The Di29-encoded recombinant protein was secreted from Sf9 insect cells and displayed low-level glutadione peroxidase activity against a range of hydroperoxide substrates, including hydrogen peroxide.

L4 ANSWER 34 OF 60 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 22
AN 1997:436582 CAPLUS
DN 127:107982
TI Parasitic helminth proteins of Dirofilaria immitis, cDNA cloning, and their use to prevent heartworm infection
IN Tripp, Cynthia Ann; ***Frank, Glenn Robert*** ; Grieve, Robert B.
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 28 pp. Cont.-in-part of U.S. Ser. No. 3,257, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5639876	A	19970617	US 1993-109391	19930819
CA 2153494	AA	19940721	CA 1994-2153494	19940112
WO 9415593	A1	19940721	WO 1994-US679	19940112

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9461254	A1	19940815	AU 1994-61254	19940112
EP 680316	A1	19951108	EP 1994-907845	19940112

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE

JP 08505772 T2 19960625 JP 1994-516380 19940112
US 5686080 A 19971111 US 1995-459019 19950602
US 5912337 A 19990615 US 1995-460428 19950602
US 6100390 A 20000808 US 1995-458860 19950602
US 5977306 A 19991102 US 1995-487031 19950606
US 6099843 A 20000808 US 1995-483474 19950607
AU 9864878 A1 19980827 AU 1998-64878 19980512
PRAI US 1991-654226 19910212
US 1993-3257 19930112
US 1993-3389 19930112
US 1993-101283 19930803
US 1993-109391 19930819
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320

AB Parasitic helminth nucleic acid sequences capable of hybridizing to at least a portion of the nucleic acid sequence encoding p4 or p22U of Dirofilaria immitis are provided. The p4-encoding nucleic acid sequence is about 913 nucleotides in length and comprises an open reading frame of 303 amino acids which has an LDL receptor-related protein class A cysteine-rich motif of 9 amino acids. The p4 nucleic acid was isolated from a D. immitis L3 and/or L4 cDNA expression library using immune serum collected from a dog that was immunized by repeated chem. abbreviated infections. The p22U nucleic acid encodes at least a substantial portion of the P22U protein, which has been identified in larval excretory-secretory exts. as well as in exts. of L3,L4 and adults. The parasitic helminth proteins are capable of selectively binding to .gtoreq.1 components of immune serum and thus inhibiting helminth development. Antibodies against such isolated parasitic helminth proteins are also raised. Therapeutic compn.s contg. such isolated nucleic acid sequences, proteins, and/or antibodies are provided. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies, and therapeutic compns. capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L4 ANSWER 35 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1997:717928 CAPLUS
DN 128:19382
TI DNA cloning and sequences for flea proteases and their uses to control flea infestation
IN Grieve, Robert B.; Rushlow, Keith E.; Hunter, Shirley Wu; ***Frank,*** *** Glenn R.*** ; Steigler, Gary L.; Gaines, Patrick J.; Silver, Gary
PA Heska Corp., USA; Grieve, Robert B.; Rushlow, Keith E.; Hunter, Shirley Wu; Frank, Glenn R.; Steigler, Gary L.; Gaines, Patrick J.; Silver, Gary
SO PCT Int. Appl., 318 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9740058	A1	19971030	WO 1997-US6121	19970424

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC,

LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 6150125 A 20001121 US 1996-639075 19960424
CA 2252581 AA 19971030 CA 1997-2252581 19970424
AU 9728015 A1 19971112 AU 1997-28015 19970424
EP 900231 A1 19990310 EP 1997-922303 19970424
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
PRAI US 1996-639075 19960424
US 1996-749699 19961115
US 1997-42945 19970404
US 1991-806482 19911213
US 1994-326773 19941018
US 1995-482130 19950607
US 1995-484211 19950607
US 1995-485455 19950607
WO 1997-US6121 19970424
US 1998-485443 19980607

AB Nucleic acid sequences encoding aminopeptidases, cysteine proteases, and serine proteases are cloned, isolated, and sequenced, and characterized from fleas isolated from various animal sources and at various developmental stages. Std. PCR techniques using degenerate oligonucleotide primers were used to clone the nucleic acids. Certain of the serine proteases are shown to cleave cat IgG, IgA, and IgM as well as bovine, dog, human, and rabbit IgG. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies, and inhibitors. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., antibodies, and/or inhibitors as well as the use of such therapeutic compns. to protect a host animal from flea infestation.

L4 ANSWER 36 OF 60 USPATFULL
AN 97:109749 USPATFULL
TI Filariid cysteine protease genes
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn R. , Ft. Collins, CO, United States
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5691186 19971125
AI US 1995-463262 19950605 (8)
RLI Continuation of Ser. No. US 1994-249552, filed on 26 May 1994, now abandoned
DT Utility
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai
LREP Ross P.C., Sheridan
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2667
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to parasite astacin metalloendopeptidase

and filariid cysteine protease proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and compounds that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasites, such as heartworm.

L4 ANSWER 37 OF 60 USPATFULL
AN 97:104113 USPATFULL
TI Parasitic helminth p4 proteins
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn Robert , Ft. Collins, CO, United States
Grieve, Robert B., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5686080 19971111
AI US 1995-459019 19950602 (8)
RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation-in-part of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. Ser. No. US 1993-3389, filed on 12 Jan 1993, now abandoned And Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US -3257 And Ser. No. US -3389 , each Ser. No. US - which is a continuation-in-part of Ser. No. US -654226
DT Utility
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2279
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to isolated parasitic helminth nucleic acid sequences capable of hybridizing, under stringent conditions, to at least a portion of D. immitis nucleic acid sequence p4 and/or to at least a portion of D. immitis nucleic acid sequence p22U; to isolated parasitic helminth proteins that are encoded by such parasitic helminth nucleic acid sequences and that are capable of selectively binding to at least one component of immune serum capable of inhibiting helminth development; and to antibodies raised against such isolated parasitic helminth proteins. The present invention also relates to therapeutic compositions comprising such isolated nucleic acid sequences, proteins and/or antibodies. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compositions capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L4 ANSWER 38 OF 60 USPATFULL
AN 97:59173 USPATFULL
TI Ectoparasite saliva proteins and apparatus to collect such proteins
IN ***Frank, Glenn R.*** , Wellington, CO, United States

Hunter, Shirley Wu, Ft. Collins, CO, United States
Wallenfels, Lynda, Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5646115 19970708
AI US 1994-319590 19941007 (8)
DT Utility
EXNAM Primary Examiner: Jacobson, Dian C.
LREP Sheridan Ross & McIntosh
CLMN Number of Claims: 33
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 3822
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is directed to a novel product and method for isolating ectoparasite saliva proteins, and a novel product and method for detecting and/or treating allergic dermatitis in an animal. The present invention includes a saliva protein collection apparatus capable of collecting ectoparasite saliva proteins substantially free of contaminating material. The present invention also relates to ectoparasite saliva proteins, nucleic acid molecules having sequences that encode such proteins, and antibodies raised against such proteins. The present invention also includes methods to obtain such proteins and to use such proteins to identify animals susceptible to or having allergic dermatitis. The present invention also includes therapeutic compositions comprising such proteins and their use to treat animals susceptible to or having allergic dermatitis.

L4 ANSWER 39 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1997:124448 CAPLUS
DN 126:127883
TI Cloning of filariid nematode cysteine protease cDNA, treatment of infection, and assays for inhibitors of the protease
IN Wisnewski, Nancy; Grieve, Robert B.; ***Frank, Glenn R.*** ; Tripp, Cynthia Ann
PA Colorado State University Research Foundation, USA; Heska Corporation; Wisnewski, Nancy; Grieve, Robert B.; Frank, Glenn R.; Tripp, Cynthia Ann
SO PCT Int. Appl., 115 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9640884	A1	19961219	WO 1996-US9848	19960607
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
US 5795768	A	19980818	US 1995-486036	19950607
AU 9661678	A1	19961230	AU 1996-61678	19960607
AU 713837	B2	19991209		
EP 846165	A1	19980610	EP 1996-919309	19960607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT				

JP 11507820 T2 19990713 JP 1996-502047 19960607
PRAI US 1995-486036 19950607
US 1991-654226 19910212
US 1991-792209 19911112
US 1993-101283 19930803
US 1993-153554 19931116
WO 1996-US9848 19960607
AB The present invention provides for filariid cysteine protease proteins; to filariid nematode cysteine protease nucleic acid mols., in particular, Dirofilaria immitis L3 larval cysteine protease nucleic acid mols. and Onchocerca volvulus L3 larval cysteine protease nucleic acid mols.; to antibodies raised against such proteins, and to compds. that inhibit filariid nematode cysteine protease activity. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies and/or inhibitors. The present invention also includes therapeutic compns. comprising such proteins, nucleic acid mols., antibodies and/or inhibitors, and the use of such compns. to protect an animal from disease caused by parasitic helminths. The cDNA's for Dirofilaria immitis and Onchocerca volvulus cysteine proteinase were cloned, sequenced, and expressed in bacteria, insect cells, and mammalian cells.

L4 ANSWER 40 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1996:422430 CAPLUS
DN 125:108868
TI Proteinases of fleas and the genes encoding them and their use in protecting animals from flea infestation
IN Grieve, Robert B.; Rushlow, Keith E.; Hunter, Shirley Wu; ***Frank,*** *** Glenn R.*** ; Stiegler, Gary L.; Heath, Andrew; Yamanaka, Miles; Arfsten, Ann; Dale, Beverly
PA Heska Corporation, USA
SO PCT Int. Appl., 240 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9611706	A1	19960425	WO 1995-US14442	19951018
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5356622	A	19941018	US 1991-806482	19911213
AU 9332470	A1	19930719	AU 1993-32470	19921210
US 5766609	A	19980616	US 1994-326773	19941018
US 5712143	A	19980127	US 1995-485455	19950607
US 5962257	A	19991005	US 1995-482130	19950607
US 5972645	A	19991026	US 1995-484211	19950607
US 6146870	A	20001114	US 1995-485443	19950607
AU 9641038	A1	19960506	AU 1996-41038	19951018
AU 705715	B2	19990527		
EP 787014	A1	19970806	EP 1995-939081	19951018

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
JP 10507455 T2 19980721 JP 1995-513499 19951018
US 6139840 A 20001031 US 1997-817795 19970801
US 6077687 A 20000620 US 1997-906769 19970805
US 6121035 A 20000919 US 1997-906616 19970805
PRAI US 1994-326773 19941018
US 1995-484211 19950607
US 1995-482130 19950607
US 1995-485443 19950607
US 1995-485455 19950607
US 1991-806482 19911213
WO 1992-US10671 19921210
WO 1995-US14442 19951018
US 1996-639075 19960424
AB Serine proteinases and aminopeptidases from the midgut of fleas (Siphonaptera) are characterized and genes encoding them cloned. Antibodies against these proteinases and inhibitors for use in the control of flea infestation are described. The characterization of a no. of proteinases from the flea midgut is demonstrated. The serine proteinases were also the major proteinase of feces. Inhibitors of these proteinase lowered the fecundity of female fleas. The proteinases were also effectives as antigens in vaccines against fleas.

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1996:379898 CAPLUS
DN 125:41815
TI Ectoparasite saliva proteins, especially flea saliva proteins, cDNA sequences, apparatus to collect such proteins, and allergic dermatitis treatment
IN ***Frank, Glenn R.*** ; Hunter, Shirley Wu; Wallenfels, Lynda
PA Heska Corporation, USA
SO PCT Int. Appl., 157 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9611271	A1	19960418	WO 1995-US13200	19951006
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5646115	A	19970708	US 1994-319590	19941007
US 5795862	A	19980818	US 1995-487001	19950607
AU 9538951	A1	19960502	AU 1995-38951	19951006
AU 703794	B2	19990401		
EP 784682	A1	19970723	EP 1995-938243	19951006
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10508467	T2	19980825	JP 1995-512718	19951006
US 5932470	A	19990803	US 1998-5069	19980108
PRAI US 1994-319590		19941007		

US 1995-487001 19950607
US 1995-487608 19950607
WO 1995-US13200 19951006
US 1996-630822 19960410

AB The present invention is directed to a novel product and method for isolating ectoparasite saliva proteins, and a novel product and method for detecting and/or treating allergic dermatitis in an animal. The present invention includes a saliva protein collection app. capable of collecting ectoparasite saliva proteins substantially free of contaminating material. The present invention also relates to ectoparasite saliva proteins, nucleic acid mols. having sequences that encode such proteins, and antibodies raised against such proteins. The present invention also includes methods to obtain such proteins and to use such proteins to identify animals susceptible to or having allergic dermatitis. The present invention also includes therapeutic compns. comprising such proteins and their use to treat animals susceptible to or having allergic dermatitis.

L4 ANSWER 42 OF 60 USPATFULL
AN 96:14597 USPATFULL
TI Vaccinating cats against Dirofilaria immitis with an L4 homogenate
IN Grieve, Robert B., La Porte, CO, United States
Frank, Glenn , Fort Collins, CO, United States
PA Colorado State University Research Foundation, Fort Collins, CO, United States (U.S. corporation)
PI US 5492695 19960220
AI US 1992-882790 19920514 (7)
DT Utility
EXNAM Primary Examiner: Mosher, Mary E.; Assistant Examiner: Caputa, Anthony C.
LREP Sheridan Ross & McIntosh
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 536

AB It has been found that hosts which are susceptible to nematode parasite infections can readily be protected from such infections when the parasites are not adapted for a parasite/host relationship to this host. In particular, feline hosts were immunized against heartworm using a variety of antigens derived from Dirofilaria immitis and related nematodes. Because cats are hosts susceptible to this nonadapted parasite, such antigens are successfully protective.

L4 ANSWER 43 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 23
AN 1996:231792 BIOSIS
DN PREV199698795921
TI Molecular cloning of a developmentally regulated protein isolated from excretory-secretory products of larval Dirofilaria immitis.
AU ***Frank, Glenn R. (1)*** ; Tripp, Cynthia A.; Grieve, Robert B.
CS (1) Paravax, Inc., 1825 Sharp Point Drive, Fort Collins, CO 80525 USA
SO Molecular and Biochemical Parasitology, (1996) Vol. 75, No. 2, pp. 231-240.
ISSN: 0166-6851.
DT Article
LA English

AB Three proteins isolated from the excretory-secretory products (ES) of larval Dirofilaria immitis have been previously characterized and termed the 20, 22L and 22U kDa proteins. Two of the proteins (20 and 22L) were produced and released around the time of the third molt and were specifically recognized by immune dog sera. An amino acid sequence common to both proteins was used to synthesize a DNA probe to molecularly clone these molecules from a 48-h third stage larval cDNA library. The DNA sequence of the isolated clones encoded a 17.5 kDa protein with a 21 amino acid hydrophobic leader sequence that when removed yielded a 15.3 kDa protein starting with the N-terminal sequence obtained from the 20 kDa protein and containing all sequences obtained from tryptic peptides of the 20 and 22L kDa proteins. It was hypothesized that the 20 and 22L kDa proteins were the same, differing only by a 21 amino acid hydrophobic leader sequence which was later cleaved. The calculated molecular masses were consistent with those determined by reducing Tris-tricine SDS-PAGE. Expression of the protein without the leader sequence was accomplished in Escherichia coli. Antiserum raised against the expressed protein demonstrated the presence of the protein in L3 and L4, but not in adults or microfilariae. Expression of the protein with the leader sequence using a baculovirus system demonstrated processing of the signal sequence at the same site as found in larval D. immitis ES. Sera from dogs immune to infection were reactive with the D. immitis proteins expressed in either E. coli or insect cells.

L4 ANSWER 44 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 24
AN 1996:231791 BIOSIS
DN PREV199698795920
TI Purification and characterization of three larval excretory-secretory proteins of Dirofilaria immitis.
AU ***Frank, Glenn R. (1)*** ; Grieve, Robert B.
CS (1) Paravax, Inc., 1825 Sharp Point Drive, Fort Collins, CO 80525 USA
SO Molecular and Biochemical Parasitology, (1996) Vol. 75, No. 2, pp. 221-229.
ISSN: 0166-6851.
DT Article
LA English
AB Two proteins were previously described in the excretory-secretory products (ES) collected from Dirofilaria immitis during the molt from the third stage to the fourth stage in vitro. The two proteins were purified using cation exchange and reverse phase HPLC. During the purification of these two proteins, a third protein was identified that co-migrated with one of the others during previous gel analysis. All three had molecular masses of 20-23 kDa as determined by Tris-glycine SDS-PAGE and have been designated 20, 22L and 22U kDa proteins. The three proteins were digested with trypsin. Amino acid sequences were subsequently determined for four peptides and the N-terminus of the 20 kDa protein, five peptides of the 22L kDa protein and three peptides of the 22U kDa protein. The 20 and 22L kDa proteins were quite similar based on sequence and purification characteristics. The 22U kDa protein, but not the 20 and 22L kDa proteins, was also identified in adult worms using tryptic mapping and amino acid sequencing techniques. Immunoblot analysis demonstrated that the 20 and 22L kDa proteins were specifically recognized by sera from dogs immune to infection by D. immitis but not by sera from infected non-immune dogs. The 22U kDa protein was weakly recognized by the same immune sera but not by the infected non-immune dog sera. Since the 20 and 22L kDa proteins appear

to be larval specific, associated in time with the molt from L3 to L4 and are specifically recognized by immune dog sera, they are good vaccine candidates.

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1996:134110 CAPLUS
DN 124:169381
TI Cloning of cDNA for parasitic proteases and their uses for preparing anti-parasite agents
IN Tripp, Cynthia Ann; ***Frank, Glenn R.*** ; Grieve, Robert B.
PA Paravax, Inc., USA
SO PCT Int. Appl., 120 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9532988	A1	19951207	WO 1995-US6685	19950525
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2189741	AA	19951207	CA 1995-2189741	19950525
AU 9526516	A1	19951221	AU 1995-26516	19950525
AU 702915	B2	19990311		
EP 766693	A1	19970409	EP 1995-921435	19950525
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE				
JP 10500854	T2	19980127	JP 1995-530582	19950525
US 5691186	A	19971125	US 1995-463262	19950605
US 5750391	A	19980512	US 1995-463989	19950605
AU 9923904	A1	19990617	AU 1999-23904	19990421

PRAI US 1994-249552 19940526
AU 1995-26516 19950525
WO 1995-US6685 19950525

AB The cDNAs encoding astacin metalloendopeptidase protein of Dirofilaria immitis (heartworm) and filariid cysteine protease protein are isolated and characterized., nucleic acid mols. having sequences that encode such proteins, antibodies raised against such proteins and compds. that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The cDNA can be used for the prodn. of the proteins and the antibodies against the proteins. The cDNAs and the antibodies are useful in the prepn. of anti-parasite compns.

L4 ANSWER 46 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1996:344179 BIOSIS
DN PREV199699066535
TI Vaccine research and development for the prevention of filarial nematode infections.
AU Grieve, Robert B.; Wisnewski, Nancy; ***Frank, Glenn R.*** ; Tripp, Cynthia A.
CS Paravax Inc., Fort Collins, CO 80525 USA

SO Powell, M. F. [Editor]; Newman, M. J. [Editor]. (1995) pp. 737-768.
Pharmaceutical Biotechnology, Vol. 6; Vaccine design: The subunit and adjuvant approach.
Publisher: Plenum Press 233 Spring Street, New York, New York, USA.
ISBN: 0-306-44867-X.
DT Book
LA English

L4 ANSWER 47 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 25
AN 1996:21904 BIOSIS
DN PREV199698594039
TI Gliding bacterial adjuvant stimulates feline cytokines in vitro and antigen-specific IgG in vivo.
AU Zeidner, Nordin S. (1); Belasco, Debra L.; Dreitz, Matthew J.; ***Frank,*** *** Glenn R.*** ; Usinger, William R.
CS (1) Dep. Immunol. Biochem., Paravax Inc., Fort Collins, CO 80525 USA
SO Vaccine, (1995) Vol. 13, No. 14, pp. 1294-1299.
ISSN: 0264-410X.
DT Article
LA English
AB Gliding bacterial adjuvant (GBA) has been previously characterized as a potent immune modulator, stimulating the growth of murine B lymphocytes, inducing murine NK cell activity, and promoting the release of several murine cytokines. Based on these studies and our interest in potentiating the effectiveness of feline vaccines, GBA was tested for its ability to stimulate feline T cells in vitro and act as a vaccine adjuvant in vivo. In vitro, GBA stimulated feline PBLs to proliferate and release interferon (IFN) and IL-2. Unlike IFN, the release of IL-2 appeared to be unaffected by prior depletion of macrophages, indicating GBA directly stimulated feline T cells. In vivo GBA was co-administered with Keyhole Limpet Hemacyanin (KLH) and the anti-KLH antibody response was compared to cats receiving KLH emulsified in complete Freund's adjuvant (CFA). Fourteen days after the third immunization and continuing for a 30-day observation period, KLH-specific IgG titers in cats receiving GBA were significantly higher than those given CFA. However, when cats were subsequently boosted with KLH alone, those cats receiving CFA demonstrated significantly higher antibody titers throughout a second 30-day observation period. The anti-KLH antibody memory response was greatly enhanced when GBA was emulsified with incomplete Freunds adjuvant (IFA) prior to injection. Serum titers of cats given KLH in an oil-based GBA preparation were significantly higher than cats receiving KLH adjuvanted with IFA or CFA, an effect which persisted 38 days after boosting with KLH alone. Finally, GBA significantly enhanced the feline humoral response to a recombinant protein of Dirofilaria immitis, the causative agent of feline heartworm. Serum titers of cats inoculated with recombinant antigen in GBA were significantly greater than cats given recombinant antigen adjuvanted with Titermax, alums, or NAGO. These studies indicate that GBA induces T cell proliferation and the release of IL-2 and IFN in vitro and can be used to enhance the recall antibody response to both a T cell dependent antigen and an immunogen derived from Dirofilaria immitis.

L4 ANSWER 48 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1995:130543 CAPLUS
DN 122:7946
TI Parasitic helminth proteins of Dirofilaria immitis and cDNA cloning

IN Grieve, Robert B.; ***Frank, Glenn R.*** ; Mika-Grieve, Marcia; Tripp, Cynthia Ann
PA Paravax, Inc., USA; Colorado State University Research Foundation
SO PCT Int. Appl., 153 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9415593	A1	19940721	WO 1994-US679	19940112
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5639876	A	19970617	US 1993-109391	19930819
AU 9461254	A1	19940815	AU 1994-61254	19940112
EP 680316	A1	19951108	EP 1994-907845	19940112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE				
JP 08505772	T2	19960625	JP 1994-516380	19940112
US 5977306	A	19991102	US 1995-487031	19950606
US 6114142	A	20000905	US 1995-473034	19950606
US 6060281	A	20000509	US 1995-482304	19950607
US 6099843	A	20000808	US 1995-483474	19950607

PRAI US 1993-3257 19930112
US 1993-3389 19930112
US 1993-109391 19930819
US 1991-654226 19910212
US 1993-101283 19930803
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320

AB Parasitic helminth nucleic acid sequences capable of hybridizing to at least a portion of nucleic acid sequence p4, p22U, P39, P22L and or P20.5 of Dirofilaria immitis are provided. The parasitic helminth proteins are capable of selectively binding to .gtoreq.1 components of immune serum and thus inhibiting helminth development. Antibodies against such isolated parasitic helminth proteins are also raised. Therapeutic compns. contg. such isolated nucleic acid sequences, proteins and/or antibodies are claimed. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compns. capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L4 ANSWER 49 OF 60 USPATFULL
AN 94:7233 USPATFULL
TI Dental equipment cleaning device
IN ***Frank, Glenn R.*** , 46 Wakeman Rd., Sherman, CT, United States 06784
Dambra, Stephen C., 11 Seymour La., Hopewell Junction, NY, United States 12533
PI US 5281139 19940125
AI US 1993-6526 19930121 (8)
DT Utility

EXNAM Primary Examiner: Wilson, John J.
LREP Walsh, Patrick J.
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 270
AB An apparatus for driving the turbine and for purging debris from the air and water spray channels of an air driven turbine-type dental handpiece in preparation for sterilizing the handpiece includes a purging chamber for confining the aerosol together with any microorganisms, bacteria, or other contaminents issuing from a handpiece being purged.

L4 ANSWER 50 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1996:136230 BIOSIS
DN PREV199698708365
TI Survey of heartworm (Dirofilaria immitis) infection in Colorado dogs: A model for surveying prevalence in low-endemic areas.
AU ***Frank, Glenn R. (1)*** ; Grieve, Robert B. (1); Mok, Meisen (1); Smart, Debra J.; Salman, Mowafak D.
CS (1) Dep. Pathol., Colo. State Univ., Fort Collins, CO 80523 USA
SO Soll, M. D. [Editor]. (1994) pp. 5-10. Proceedings of the Heartworm Symposium '92.
Publisher: American Heartworm Society P. O. Box 667, Batavia, Illinois 60510-0667.
Meeting Info.: Proceedings of the Heartworm Symposium '92 Austin, Texas, USA March 27-29, 1992
ISBN: 1-878353-29-2.
DT Book; Conference
LA English

L4 ANSWER 51 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1993:503307 CAPLUS
DN 119:103307
TI Protease vaccine against heartworm
IN Grieve, Robert B.; Richer, Jennifer; ***Frank, Glenn R.*** ; Sakanari, Judy
PA Colorado State University Research Foundation, USA
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9310225	A1	19930527	WO 1992-US9702	19921112
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
AU 9230723	A1	19930615	AU 1992-30723	19921112
AU 675214	B2	19970130		
EP 635058	A1	19950125	EP 1992-924400	19921112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE				
JP 07501219	T2	19950209	JP 1992-509382	19921112
PRAI US 1991-792209		19911112		
WO 1992-US9702		19921112		

AB Animals are administered with an effective amt. of a metalloprotease

and/or cysteine protease, which is obtainable from filarial nematode lysates in third larval stage (L3) or fourth stage (L4), to immunol. protect the subjects against filarial infection. Dirofilaria immitis was cultured and a protease was obtained by purifying L3/L4 lysates with a column chromatog. and assaying fractions for proteolytic activity on synthetic substrates, i.e. benzyloxycarbonyl-Val-Leu-Arg-7-amido-4-methylcoumarin and Phe-7-amido-4-methylcoumarin.

L4 ANSWER 52 OF 60 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1993:219802 BIOSIS
DN PREV199344104302
TI Characterization of two larval excretory-secretory proteins of Dirofilaria immitis released at the time of the third molt.
AU ***Frank, Glenn R. (1)*** ; Grieve, Robert B.
CS (1) Dep. Pathol., Colo. State Univ., Fort Collins, CO 80523 USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART C, pp. 107.
Meeting Info.: Keystone Symposium on Molecular Helminthology: An Integrated Approach Tamarron, Colorado, USA February 10-17, 1993
ISSN: 0733-1959.
DT Conference
LA English

L4 ANSWER 53 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1994:213062 CAPLUS
DN 120:213062
TI Characterization and cloning of molt associated excretory-secretory proteins of Dirofilaria immitis
AU ***Frank, Glenn Robert***
CS Colorado State Univ., Fort Collins, CO, USA
SO (1992) 165 pp. Avail.: Univ. Microfilms Int., Order No. DA9311376
From: Diss. Abstr. Int. B 1993, 53(12, Pt. 1), 6126-7
DT Dissertation
LA English
AB Unavailable

L4 ANSWER 54 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1992:590108 CAPLUS
DN 117:190108
TI Reagents and methods for identification of vaccines against canine heartworm or other infectious agents
IN Grieve, Robert B.; ***Frank, Glenn*** ; Mika-Grieve, Marcia; Culpepper, Janice A.
PA Colorado State University Research Foundation, USA; Paravax, Inc.
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9213560	A1	19920820	WO 1992-US848	19920130
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2103788	AA	19920813	CA 1992-2103788	19920130

AU 9214237 A1 19920907 AU 1992-14237 19920130
EP 571536 A1 19931201 EP 1992-907018 19920130
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE
JP 06508602 T2 19940929 JP 1992-506629 19920130
PRAI US 1991-654226 19910212
WO 1992-US848 19920130
AB Cells, serum, or fractions thereof from exposed hosts, esp. those with demonstrated ability to protect against infection, are screening reagents to identify antigens for use in protective vaccines. Biol. materials from exposed native hosts can be validated in vivo in an irrelevant host by their ability to destroy or impair the infectious agent. Validation is performed by implanting the infectious agent, in a membrane enclosure, into an animal host (e.g. a mouse) to which the candidate screening reagent has been transferred. The candidate providing successful destruction or impairment of the infectious agent can then be used to screen antigens produced by cDNA expression libraries or in exts. of the infectious agents to identify components of effective vaccines. Using this method, candidate heartworm immunogens, esp. a 39 kDa immunogen, have been identified.

L4 ANSWER 55 OF 60 USPATFULL
AN 92:86478 USPATFULL
TI Dental equipment cleaning apparatus and method
IN ***Frank, Glenn R.*** , New Fairfield, CT, United States
Stewart, Jr., Edward T., New Milford, CT, United States
PA Robert Constantine, Inc., Somers, NY, United States (U.S. corporation)
PI US 5156546 19921020
AI US 1989-428164 19891027 (7)
DCD 20061031
RLI Continuation of Ser. No. US 1988-205735, filed on 13 Jun 1988, now patented, Pat. No. US 4877399
DT Utility
EXNAM Primary Examiner: Swiatek, Robert P.; Assistant Examiner: Lucchesi, Nicholas D.
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 252
AB Method and apparatus for cleaning clogged dental equipment lines, such as water and air lines and drains, for a wide variety of dental equipment such as cuspidors and handpieces. One embodiment has an air hose connected to a connector for a handpiece for a drill, etc., wherein the connector has an interior plastic insert which closes off air to the holes in the drill for drive and exhaust air and allows air through two holes which connect with the spray air and water ports of the handpiece for the drill whererby the air blows out the clogged slits. Another embodiment uses the air hose with a rubber nozzle to blow clogged suction lines. Another embodiment has a rubber element with a hole in its middle which fits over the discharge hole in the cuspidor, whereby the air blows out the debris clogging the cuspidor hole and connecting lines.

L4 ANSWER 56 OF 60 USPATFULL
AN 92:54301 USPATFULL
TI Dental equipment cleaning apparatus and method

IN ***Frank, Glenn R.*** , New Fairfield, CT, United States
Stewart, Jr., Edward T., New Milford, CT, United States
PA Robert Constantine, Inc., Hopewell Junction, NY, United States (U.S. corporation)
PI US 5127129 19920707
AI US 1989-383705 19890724 (7)
RLI Division of Ser. No. US 1988-205735, filed on 13 Jun 1988, now patented, Pat. No. US 4877397, issued on 31 Oct 1989
DT Utility
EXNAM Primary Examiner: Moore, Chris K.
LREP Walsh, Patarick J.
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 222
AB An apparatus for cleaning clogged dental equipment lines, such as water and air lines and drains, for a wide variety of dental equipment such as cuspidors and handpieces. One embodiment has an air hose connected to a connector for a handpiece for a drill, etc., wherein the connector has an interior plastic insert which closes off air to the holes in the drill for drive and exhaust air and allows air through two holes which connect with the spray air and water ports of the handpiece for the drill whereby the air blows out the clogged slits. Another embodiment uses the air hose with a rubber nozzle to blow clogged suction lines. Another embodiment has a rubber element with a hole in its middle which fits over the discharge hole in the cuspidor, whereby the air blows out the debris clogging the cuspidor hole and connecting lines.

L4 ANSWER 57 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1993:165515 CAPLUS
DN 118:165515
TI Dirofilaria immitis: proteases produced by third- and fourth-stage larvae
AU Richer, Jennifer K.; Sakanari, Judy A.; ***Frank, Glenn R.*** ; Grieve, Robert B.
CS Dep. Pathol., Colorado State Univ., Fort Collins, CO, 80523, USA
SO Exp. Parasitol. (1992), 75(2), 213-22
CODEN: EXPAAA; ISSN: 0014-4894
DT Journal
LA English
AB A model of cutaneous extracellular matrix was used to det. if live Dirofilaria immitis larvae secrete proteases that are active at physiol. pH and capable of degrading macromols. found in cutaneous tissue. After 72 h, 100 third-stage larvae (L3) degraded 24% of the total matrix, while fourth-stage larvae (L4) degraded 10%. A sharp increase in the amt. of matrix degraded by L3 corresponded with the onset of the molting process. L3 and L4 degraded comparable amts. of the glycoprotein and elastin components of the matrix, but molting L3 degraded nearly twice the amt. of the collagen component (62% vs 35%). Characterization of proteases present in larval-sol. exts. and excretory-secretory products using synthetic substrates and protease inhibitors demonstrated cysteine-protease and metalloprotease activity. Cysteine protease activity was found in whole worm exts. of both L3 and L4. Metalloprotease was secreted at higher levels by molting L3, but was also secreted by L4. Partial sepn. of the metalloprotease by size-exclusion chromatog. indicated that the mol. wt. of the native enzyme was in the 49-54 kDa

range. The cysteine protease activity was demonstrated in fractions corresponding to 34-39 kDa. The biol. function of the D. immitis larval proteases remains to be conclusively detd.; however, these data suggest that they are involved in degrdn. of components of cutaneous tissue and in the molting process.

L4 ANSWER 58 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1992:548889 CAPLUS
DN 117:148889
TI Molecular characterization of a Dirofilaria immitis cDNA encoding a highly immunoreactive antigen
AU Culpepper, Janice; Grieve, Robert B.; Friedman, Lori; Mika-Grieve, Marcia; ***Frank, Glenn R.*** ; Dale, Beverly
CS Paravax, Inc., Mountain View, CA, USA
SO Mol. Biochem. Parasitol. (1992), 54(1), 51-62
CODEN: MBIPDP; ISSN: 0166-6851
DT Journal
LA English
AB The filarial nematode, D. immitis, is the causative agent of canine and feline heartworm disease. Previous research has demonstrated that immunity to D. immitis can be induced in dogs by repeated chem. abbreviation of infections while the parasite is a fourth-stage larva. Sera obtained from dogs immunized in this manner has been effective in passively transferring larval killing and stunting. These immune sera, by comparison to nonimmune sera from infected cohorts, recognize a no. of unique D. immitis antigens, some of which are larval specific. In this study immune dog sera were used to screen a D. immitis larval cDNA expression library. Three overlapping cDNA clones, Di22, Di18 and Di16, were obtained that encode a portion of a large mol., >150 kDa, that is composed of multiples of a 399-bp repeat. This protein when immunoblotted with antibody against a recombinant expressed Di22 fusion protein is found in larval as well as adult exts. and excretory-secretory products, and is seen as a series of ascending subunits, each approx. 15 kDa larger than the previous one. This antigen is highly immunogenic, as evidenced by the strong reactivity of the recombinant expressed Di22 fusion protein with sera from immune dogs, microfilaremic dogs and infected amicrofilaremic dogs. While the function of this antigen is unknown it has significant sequence similarity with an allergen found in Ascaris.

L4 ANSWER 59 OF 60 CAPLUS COPYRIGHT 2000 ACS
AN 1992:191346 CAPLUS
DN 116:191346
TI Metabolic labeling of Dirofilaria immitis third- and fourth-stage larvae and their excretory-secretory products
AU ***Frank, Glenn R.*** ; Grieve, Robert B.
CS Dep. Pathol., Colorado State Univ., Fort Collins, CO, 80523, USA
SO J. Parasitol. (1991), 77(6), 950-6
CODEN: JOPAA2; ISSN: 0022-3395
DT Journal
LA English
AB Infective 3rd-stage larvae of D. immitis were collected from Aedes aegypti and cultured in vitro and the 4th stage. Larval proteins were labeled metabolically using [35S]cysteine and methionine in different media and for different lengths of time. Labeled proteins in the excretory-secretory component and the larval homogenates were evaluated by

SDS-PAGE under reducing and nonreducing conditions and by 2-dimensional gel electrophoresis. Numerous proteins ranging from 14 to >200 kDa were identified from both the excretory-secretory components and the larval homogenates. Both fractions demonstrated shared and unique proteins. Using timed labeling, age- and stage-specific proteins were identified; .gtoreq.2 proteins of .apprx.20.5 and 22 kDa were assocd. in time with the molt from the 3rd to 4th stage. Two proteins of the same mol. wt. were specifically recognized by immune dog sera, but not by sera of their infected nonimmune cohorts.

L4 ANSWER 60 OF 60 USPATFULL
AN 89:88822 USPATFULL
TI Dental equipment cleaning apparatus and method
IN ***Frank, Glenn R.*** , New Fairfield, CT, United States
Stewart, Jr., Edward T., New Milford, CT, United States
PA Robert Thomas Ltd., Media, PA, United States (U.S. individual)
PI US 4877399 19891031
AI US 1988-205735 19880613 (7)
DT Utility
EXNAM Primary Examiner: Peshock, Robert
LREP Bowie, Stuart S.
CLMN Number of Claims: 2
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 253
AB Method and apparatus for cleaning clogged dental equipment lines, such as water and air lines and drains, for a wide variety of dental equipment such as cuspidors and handpieces. One embodiment has an air hose connected to a connector for a handpiece for a drill, etc., wherein the connector has an interior plastic insert which closes off air to the holes in the drill for drive and exhaust air and allows air through two holes which connect with the spray air and water ports of the handpiece for the drill whereby the air blows out the clogged slits. Another embodiment uses the air hose with a rubber nozzle to blow clogged suction lines. Another embodiment has a rubber element with a hole in its middle which fits over the discharge hole in the cuspidor, whereby the air blows out the debris clogging the cuspidor hole and connecting lines.

=> e grieve robert/au

E1 21 GRIEVE RICHARD A F/AU
E2 1 GRIEVE RICK/AU
E3 1 --> GRIEVE ROBERT/AU
E4 88 GRIEVE ROBERT B/AU
E5 12 GRIEVE ROBIN L/AU
E6 28 GRIEVE S/AU
E7 3 GRIEVE S H/AU
E8 48 GRIEVE S J/AU
E9 15 GRIEVE S M/AU
E10 1 GRIEVE SIDNEY M/AU
E11 1 GRIEVE STEVEN/AU
E12 9 GRIEVE STUART M/AU

=> s e3-e4

L5 89 ("GRIEVE ROBERT"/AU OR "GRIEVE ROBERT B"/AU)

=> dup rem l5

PROCESSING COMPLETED FOR L5
L6 66 DUP REM L5 (23 DUPLICATES REMOVED)

=> d bib ab 1-

YOU HAVE REQUESTED DATA FROM 66 ANSWERS - CONTINUE? Y/(N):y

L6 ANSWER 1 OF 66 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 1
AN 2000:802342 CAPLUS
TI Flea protease proteins
IN ***Grieve, Robert B.*** ; Rushlow, Keith E.; Hunter, Shirley Wu; Frank, Glenn R.; Stiegler, Gary L.
PA Heska Corporation, USA
SO U.S., 64 pp., Cont.-in-part of U.S. 5,766,609.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6146870	A	20001114	US 1995-485443	19950607
US 5356622	A	19941018	US 1991-806482	19911213
AU 9332470	A1	19930719	AU 1993-32470	19921210
US 5766609	A	19980616	US 1994-326773	19941018
CA 2202622	AA	19960425	CA 1995-2202622	19951018
WO 9611706	A1	19960425	WO 1995-US14442	19951018
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9641038	A1	19960506	AU 1996-41038	19951018
AU 705715	B2	19990527		
EP 787014	A1	19970806	EP 1995-939081	19951018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10507455	T2	19980721	JP 1995-513499	19951018
US 6077687	A	20000620	US 1997-906769	19970805
US 6121035	A	20000919	US 1997-906616	19970805

PRAI US 1991-806482 19911213
US 1994-326773 19941018
WO 1992-US10671 19921210
US 1995-482130 19950607
US 1995-484211 19950607
US 1995-485443 19950607
US 1995-485455 19950607
WO 1995-US14442 19951018

US 1996-639075 19960424

AB The present invention relates to flea serine protease and aminopeptidase proteins; to flea serine protease and aminopeptidase nucleic acid mols., including those that encode such proteins; to antibodies raised against such proteins; and to compds. that inhibit flea serine protease and/or aminopeptidase activities. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies, and inhibitors. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., antibodies, and/or inhibitors as well as the use of such therapeutic compns. to protect a host animal from flea infestation.

L6 ANSWER 2 OF 66 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 2

AN 2000:623706 CAPLUS

DN 133:220511

TI A 39 kilodalton antigen common to parasitic helminths, cDNAs encoding them and the development of vaccines

IN ***Grieve, Robert B.*** ; Frank, Glenn R.; Smika-grieve, Marcia; Tripp, Cynthia Ann

PA Heska Corp., USA; Colorado State Universtiy Research Foundation

SO U.S., 52 pp., Cont.-in-part of U.S. Ser. No. 3,389, abandoned.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6114142	A	20000905	US 1995-473034	19950606
WO 9415593	A1	19940721	WO 1994-US679	19940112

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

PRAI US 1991-654226 19910212
US 1993-3389 19930112
US 1993-101283 19930803
WO 1994-US679 19940112
US 1993-3257 19930112
US 1993-109391 19930819

AB An antigen common to a no. of parasitic helminths that is a protein of about 39 kD (i.e., P39 proteins) that may be of use in the development of vaccines against these parasites is identified and cDNAs encoding it are cloned and expressed. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., and/or antibodies as well as the use of such therapeutic compns. to protect animals from diseases caused by parasitic helminths. The antigens recognized by dog immune serum to Dirofilaria immitis were identified by std. Western blots and the corresponding cDNAs cloned by antibody screening of expression libraries. Expression of the gene to generate a protein recognized by immune serum using Escherichia coli and in eukaryotic cells using Sindbis virus vectors is demonstrated.

RE.CNT 58

RE

(6) Amiri; Mol Biochem Parasitol 1988, V28, P113 CAPLUS

(8) Anon; WO 9213560 1992 CAPLUS
(10) Bianco; Mol Biochem Parasitol 1990, V39, P203 CAPLUS
(13) Chomczynski; Anal Biochem 1987, V162, P156 CAPLUS
(15) Culpepper; Mol Biochem Parasitol 1992, V54, P51 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 66 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 3
AN 2000:547369 CAPLUS
DN 133:163025
TI Parasitic helminth PLA2 proteins
IN ***Grieve, Robert B.*** ; Frank, Glenn R.; Wisnewski, Nancy
PA Heska Corporation, USA; Colorado State University Research Foundation
SO U.S., 63 pp., Cont.-in-part of U.S. 5,804,200.
.CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6099843	A	20000808	US 1995-483474	19950607
US 5639876	A	19970617	US 1993-109391	19930819
WO 9415593	A1	19940721	WO 1994-US679	19940112

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 5804200	A	19980908	US 1995-408120	19950320

PRAI US 1991-654226 19910212
US 1993-3257 19930112
US 1993-3389 19930112
US 1993-101283 19930803
US 1993-109391 19930819
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320
AB The present invention relates to parasitic helminth PLA2 proteins; to parasitic helminth PLA2 nucleic acid mols., including those that encode such proteins; to antibodies raised against such proteins; and to compds. that inhibit parasitic helminth phospholipase A2 activity. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies, and inhibitors. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., antibodies, and/or inhibitors as well as the use of such therapeutic compns. to protect animals from diseases caused by parasitic helminths.
RE.CNT 69
RE
(5) Amiri; Mol Biochem Pharasitol 1988, V28, P113 CAPLUS
(7) Anon; WO 9003433 1990 CAPLUS
(8) Anon; EP 0571911 1993 CAPLUS
(9) Anon; WO 9323542 1993 CAPLUS
(11) Bianco; Mol Biochem Parasitol 1990, V39, P203 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 66 USPATFULL

AN 2000:157179 USPATFULL
TI Flea protease proteins and uses thereof
IN ***Grieve, Robert B.*** , Windsor, CO, United States
Rushlow, Keith E., Ft. Collins, CO, United States
Hunter, Shirley Wu, Ft. Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
Stiegler, Gary L., Ft. Collins, CO, United States
Gaines, Patrick J., Ft. Collins, CO, United States
Silver, Gary, Ft. Collins, CO, United States
PA Heska Corporation, Ft.Collins, CO, United States (U.S. corporation)
PI US 6150125 20001121
AI US 1996-639075 19960424 (8)
RLI Continuation-in-part of Ser. No. US 1995-484211, filed on 7 Jun 1995, now patented, Pat. No. US 5972645, issued on 26 Oct 1999 And a continuation-in-part of Ser. No. US 1995-482130, filed on 7 Jun 1995, now patented, Pat. No. US 5962257, issued on 5 Oct 1999 And a continuation-in-part of Ser. No. US 1998-485443, filed on 7 Jun 1998 And a continuation-in-part of Ser. No. US 1995-485455, filed on 7 Jun 1995, now patented, Pat. No. US 5712143, issued on 27 Jan 1998 which is a continuation-in-part of Ser. No. US 1994-326773, filed on 18 Oct 1994, now patented, Pat. No. US 5766609, issued on 16 Jun 1998 which is a continuation-in-part of Ser. No. US 1991-806482, filed on 13 Dec 1991, now patented, Pat. No. US 5356622, issued on 18 Oct 1994
DT Utility
EXNAM Primary Examiner: Allen, Marianne P.
LREP Sheridan Ross, P.C.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 9114
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to flea serine protease proteins, aminopeptidase proteins and flea cysteine protease proteins; to flea serine protease, aminopeptidase and cysteine protease nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit flea serine protease, aminopeptidase and/or cysteine protease activities. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect a host animal from flea infestation.

L6 ANSWER 5 OF 66 USPATFULL
AN 2000:145886 USPATFULL
TI Methods of eliciting an antibody response using flea protease proteins and homologs thereof
IN ***Grieve, Robert B.*** , Ft. Collins, CO, United States
Rushlow, Keith E., Ft. Collins, CO, United States
Hunter, Shirley W., Ft. Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
Stiegler, Gary L., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6139840 20001031
WO 9611706 19960425

AI US 1997-817795 19970801 (8)
WO 1995-US14442 19951018
19970801 PCT 371 date
19970801 PCT 102(e) date
DT Utility
EXNAM Primary Examiner: Allen, Marianne P.
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 5533
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to flea serine protease and aminopeptidase proteins; to flea serine protease and aminopeptidase nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit flea serine protease and/or aminopeptdiase activities. The present invention also includes methods to obtain such proteins, nucleic acid moelcules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect a host animal from flea infestation.

L6 ANSWER 6 OF 66 USPATFULL
AN 2000:124813 USPATFULL
TI Flea aminopeptidase proteins and uses thereof
IN ***Grieve, Robert B.*** , Ft. Collins, CO, United States
Rushlow, Keith E., Ft. Collins, CO, United States
Hunter, Shirley Wu, Ft. Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
Stiegler, Gary L., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6121035 20000919
AI US 1997-906616 19970805 (8)
RLI Division of Ser. No. US 1996-639075, filed on 24 Apr 1996 which is a continuation-in-part of Ser. No. US 1995-484211, filed on 7 Jun 1995, now patented, Pat. No. US 5972645 And a continuation-in-part of Ser. No. US 1995-482130, filed on 7 Jun 1995, now patented, Pat. No. US 5962257 And a continuation-in-part of Ser. No. US 1995-485443, filed on 7 Jun 1995 And a continuation-in-part of Ser. No. US 1995-485455, filed on 7 Jun 1995, now patented, Pat. No. US 5712143 , said Ser. No. US 484211 , said Ser. No. US 482130 , said Ser. No. US 485443 which is a continuation-in-part of Ser. No. US 1994-326773, filed on 18 Oct 1994, now patented, Pat. No. US 5766609 which is a continuation-in-part of Ser. No. US 1991-806482, filed on 13 Dec 1991, now patented, Pat. No. US 5356622 , said Ser. No. US 1996-639075, filed on 24 Apr 1996 which is a continuation-in-part of Ser. No. US 1994-326773, filed on 18 Oct 1994, now patented, Pat. No. US 5766609 And a continuation-in-part of Ser. No. WO 1995-US14442, filed on 18 Oct 1995
DT Utility
EXNAM Primary Examiner: Allen, Marianne P.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 8902

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to flea serine protease proteins, aminopeptidase proteins and flea cysteine protease proteins; to flea serine protease, aminopeptidase and cysteine protease nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit flea serine protease, aminopeptidase and/or cysteine protease activities. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect a host animal from flea infestation.

L6 ANSWER 7 OF 66 USPATFULL

AN 2000:102422 USPATFULL

TI Parasitic helminth p22U nucleic acid molecules

IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn Robert, Ft. Collins, CO, United States
Grieve, Robert B. , Ft. Collins, CO, United States

PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)

PI US 6100390 20000808

AI US 1995-458860 19950602 (8)

RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. Ser. No. US 1993-3389, filed on 12 Jan 1993 And Ser. No. US 1991-654226, filed on 12 Feb 1991 , said Ser. No. US 3257 And Ser. No. US 3389 which is a continuation-in-part of Ser. No. US 654226

DT Utility

EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Swartz, Rodney P.

LREP Sheridan Ross P.C.

CLMN Number of Claims: 11

ECL Exemplary Claim: 1

DRWN 2 Drawing Figure(s); 2 Drawing Page(s)

LN.CNT 2469

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to isolated parasitic helminth nucleic acid sequences capable of hybridizing, under stringent conditions, to at least a portion of D. immitis nucleic acid sequence p4 and/or to at least a portion of D. immitis nucleic acid sequence p22U; to isolated parasitic helminth proteins that are encoded by such parasitic helminth nucleic acid sequences and that are capable of selectively binding to at least one component of immune serum capable of inhibiting helminth development; and to antibodies raised against such isolated parasitic helminth proteins. The present invention also relates to therapeutic compositions comprising such isolated nucleic acid sequences, proteins and/or antibodies. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compositions capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L6 ANSWER 8 OF 66 USPATFULL

AN 2000:77203 USPATFULL
TI Flea aminopeptidase nucleic acid molecules and uses thereof
IN ***Grieve, Robert B.*** , Windsor, CO, United States
Rushlow, Keith E., Ft. Collins, CO, United States
Hunter, Shirley Wu, Ft. Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
Stiegler, Gary L., Ft. Collins, CO, United States
Gaines, Patrick J., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6077687 20000620
AI US 1997-906769 19970805 (8)
RLI Division of Ser. No. US 1996-639075, filed on 24 Apr 1996 which is a continuation-in-part of Ser. No. US 1995-484211, filed on 7 Jun 1995, now patented, Pat. No. US 5922645 which is a continuation-in-part of Ser. No. US 1995-482130, filed on 7 Jun 1995, now patented, Pat. No. US 5962257 And a continuation-in-part of Ser. No. US 1995-485455, filed on 7 Jun 1995, now patented, Pat. No. US 5712143, issued on 27 Jan 1998 which is a continuation-in-part of Ser. No. US 1994-326773, filed on 18 Oct 1994, now patented, Pat. No. US 5766609, issued on 16 Jun 1998 which is a continuation-in-part of Ser. No. US 1991-806482, filed on 13 Dec 1991, now patented, Pat. No. US 5356622, issued on 18 Oct 1994 And a continuation-in-part of Ser. No. WO 1995-US14442, filed on 18 Oct 1995 which is a continuation-in-part of Ser. No. US 1995-485443, filed on 7 Jun 1995
DT Utility
EXNAM Primary Examiner: Allen, Marianne P.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 7742
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to flea serine protease proteins, aminopeptidase proteins and flea cysteine protease proteins; to flea serine protease, aminopeptidase and cysteine protease nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit flea serine protease, aminopeptidase and/or cysteine protease activities. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect a host animal from flea infestation.

L6 ANSWER 9 OF 66 USPATFULL
AN 2000:57576 USPATFULL
TI Parasitic helminth PLA2 proteins and nucleic acid molecules
IN ***Grieve, Robert B.*** , Fort Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
Wisnewski, Nancy, Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6060281 20000509
AI US 1995-482304 19950607 (8)

RLI Continuation-in-part of Ser. No. US 1995-408120, filed on 20 Mar 1995, now patented, Pat. No. US 5804200 which is a continuation of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned And a continuation-in-part of Ser. No. US 1994-225479, filed on 8 Apr 1994, now abandoned And a continuation-in-part of Ser. No. US 1993-101283, filed on 3 Aug 1993, now abandoned which is a continuation of Ser. No. US 654226 And a continuation-in-part of Ser. No. WO 1994-US679, filed on 12 Jan 1994, now abandoned
DT Utility
EXNAM Primary Examiner: Minnifield, Nita; Assistant Examiner: Masood, Khalid
LREP Sheridan Ross P.C.
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 13 Drawing Page(s)
LN.CNT 4349
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasitic helminth PLA2 proteins; to parasitic helminth PLA2 nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit parasitic helminth phospholipase A.sub.2 activity. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect animals from diseases caused by parasitic helminths.

L6 ANSWER 10 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 4
AN 2000:291945 BIOSIS
DN PREV200000291945
TI Parasitic helminth P39 proteins, and uses thereof.
AU ***Grieve, Robert B. (1)*** ; Frank, Glenn R.; Mika-Grieve, Marci; Tripp, Cynthia Ann
CS (1) Ft. Collins, CO USA
ASSIGNEE: Heska Corporation, Ft. Collins, CO, USA; Colorado State University Research Foundation, Ft. Collins, CO, USA
PI US 5977306 November 02, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 2, 1999) Vol. 1228, No. 1, pp. No pagination. e-file..
ISSN: 0098-1133.
DT Patent
LA English
AB The present invention relates to parasitic helminth proteins of about 39 kD (i.e., P39 proteins); to parasitic helminth P39 nucleic acid molecules, including those that encode such proteins; and to antibodies raised against such proteins. The present invention also includes methods to obtain such proteins, nucleic acid molecules, and antibodies. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, and/or antibodies as well as the use of such therapeutic compositions to protect animals from diseases caused by parasitic helminths.

L6 ANSWER 11 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 5
AN 2000:278407 BIOSIS

DN PREV200000278407
TI Flea serine protease nucleic acid molecules.
AU ***Grieve, Robert B. (1)*** ; Rushlow, Keith E.; Hunter, Shirley Wu; Frank, Glenn R.; Stiegler, Gary L.
CS (1) Ft. Collins, CO USA
ASSIGNEE: Heska Corporation, Ft. Collins, CO, USA
PI US 5972645 October 26, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Oct. 26, 1999) Vol. 1227, No. 4, pp. No pagination. e-file..
ISSN: 0098-1133.
DT Patent
LA English
AB The present invention relates to flea serine protease and aminopeptidase proteins; to flea serine protease and aminopeptidase nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit flea serine protease and/or aminopeptidase activities. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect a host animal from flea infestation.

L6 ANSWER 12 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 6
AN 1999:385879 BIOSIS
DN PREV199900385879
TI Parasitic helminth p22U proteins.
AU Tripp, Cynthia Ann (1); Frank, Glenn Robert; ***Grieve, Robert B.***
CS (1) Department of Exercise and Sport Science, Colorado State University, Ft. Collins, CO USA
.ASSIGNEE: Colorado State University Research Foundation
PI US 5912337 Jun. 15, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Jun.15, 1999) Vol. 1223, No. 3, pp. NO PAGINATION.
ISSN: 0098-1133.
DT Patent
LA English

L6 ANSWER 13 OF 66 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 7
AN 1999:633275 CAPLUS
DN 131:267972
TI Protein and cDNA sequences of flea midgut serine proteases and leucine aminopeptidases, and uses of inhibitors thereof in reducing flea infestation of animals
IN ***Grieve, Robert B.*** ; Rushlow, Keith E.; Hunter, Shirley Wu; Frank, Glenn R.; Stiegler, Gary L.
PA Heska Corporation, USA
SO U.S., 65 pp., Cont.-in-part of U.S. 5,766,609.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5962257	A	19991005	US 1995-482130	19950607

US 5356622 A 19941018 US 1991-806482 19911213
AU 9332470 A1 19930719 AU 1993-32470 19921210
US 5766609 A 19980616 US 1994-326773 19941018
CA 2202622 AA 19960425 CA 1995-2202622 19951018
WO 9611706 A1 19960425 WO 1995-US14442 19951018
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
AU 9641038 A1 19960506 AU 1996-41038 19951018
AU 705715 B2 19990527
EP 787014 A1 19970806 EP 1995-939081 19951018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
JP 10507455 T2 19980721 JP 1995-513499 19951018
US 6150125 A 20001121 US 1996-639075 19960424
US 6077687 A 20000620 US 1997-906769 19970805
US 6121035 A 20000919 US 1997-906616 19970805
PRAI US 1991-806482 19911213
US 1994-326773 19941018
WO 1992-US10671 19921210
US 1995-482130 19950607
US 1995-484211 19950607
US 1995-485443 19950607
US 1995-485455 19950607
WO 1995-US14442 19951018
US 1996-639075 19960424
US 1998-485443 19980607

AB The invention provides protein and cDNA sequences of novel serine proteases and leucine aminopeptidases which were isolated from the midgut of fleas. The invention is particularly concerned with a leucine aminopeptidase (LAP) that is 151 amino acids in length and has 32% identity with the bovine lens LAP. In certain embodiments, the invention relates to the use of compds. that inhibit the novel flea proteases and aminopeptidases to reduce flea infestation of animals.

RE.CNT 50
RE
(1) Anon; WO 9003433 1990 CAPLUS
(5) Borovsky; Arch Insect Biochem Physiol 1988, V7, P187 CAPLUS
(6) Borovsky; FASEB J 1990, V4, P3015 CAPLUS
(7) Casu; Insect Mol Biol 1994, V3(3), P159 CAPLUS
(8) Casu; Insect Mol Biol 1994, V3(4), P201 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 14 OF 66 USPATFULL
AN 1999:15487 USPATFULL
TI Dirofilaria immitis GP29 antibodies and uses thereof
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B. , Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5866126 19990202
AI US 1997-833622 19970408 (8)

RLI Continuation of Ser. No. US 1995-462177, filed on 5 Jun 1995, now patented, Pat. No. US 5618532 which is a continuation of Ser. No. US 1994-208885, filed on 8 Mar 1994, now patented, Pat. No. US 5569603, issued on 29 Oct 1996
DT Utility
EXNAM Primary Examiner: Caputa, Anthony C.; Assistant Examiner: Navarro, Mark
LREP Sheridan Ross P.C.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1757
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to D. immitis Gp29 proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and inhibitors of D. immitis glutathione peroxidase. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasitic helminths, such as heartworm.

L6 ANSWER 15 OF 66 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 8
AN 1998:564165 CAPLUS
DN 129:198889
TI Filariid nematode cysteine protease proteins, nucleic acid molecules and their uses to treat infection
IN Tripp, Cynthia Ann; Wisnewski, Nancy; ***Grieve, Robert B.*** ; Frank, Glenn R.
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 22 pp. Cont.-in-part of U. S. Ser. No. 153,554, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5795768	A	19980818	US 1995-486036	19950607
CA 2224184	AA	19961219	CA 1996-2224184	19960607
WO 9640884	A1	19961219	WO 1996-US9848	19960607
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
AU 9661678	A1	19961230	AU 1996-61678	19960607
AU 713837	B2	19991209		
EP 846165	A1	19980610	EP 1996-919309	19960607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT				
JP 11507820	T2	19990713	JP 1996-502047	19960607
PRAI US 1991-654226		19910212		
US 1991-792209		19911112		
US 1993-101283		19930803		
US 1993-153554		19931116		

US 1995-486036 19950607
WO 1996-US9848 19960607

AB The present invention provides for filariid nematode cysteine protease proteins; to filariid nematode cysteine protease nucleic acid mols., in particular, Dirofilaria immitis L3 larval cysteine protease nucleic acid mols. and Onchocerca volvulus L3 larval cysteine protease nucleic acid mols.; to antibodies raised against such proteins, and to compds. that inhibit filariid nematode cysteine protease activity. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies and/or inhibitors. The present invention also includes therapeutic compns. comprising such proteins, nucleic acid mols., antibodies and/or inhibitors, and the use of such compns. to protect an animal from disease caused by parasitic helminths.

L6 ANSWER 16 OF 66 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 9
AN 1998:545389 CAPLUS
DN 129:172447
TI Dirofilaria and onchocerca larval l3 cysteine protease proteins and uses thereof
IN Tripp, Cynthia Ann; Wisnewski, Nancy; ***Grieve, Robert B.*** ; Frank, Glenn R.; Richer, Jennifer K.
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 22 pp. Cont.-in-part of U. S. Ser. No. 153,554, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5792624	A	19980811	US 1995-482282	19950607

PRAI US 1991-654226 19910212
US 1991-792209 19911112
US 1993-101283 19930803
US 1993-153554 19931116

AB The present invention describes filariid nematode cysteine protease proteins and their genes from Dirofilaria immitis and Onchocerca volvulus. Antibodies raised against cystein protease proteins and compds. that inhibit filariid nematode cysteine protease activity are described. Therapeutic compns. and methods to obtain such proteins, nucleic acid mols., antibodies and/or inhibitors are also described. The use of such compns. to protect an animal from heartworm disease caused by parasitic helminths is relayed.

L6 ANSWER 17 OF 66 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 10
AN 1998:414630 CAPLUS
DN 129:72222
TI Use of protease inhibitors and protease vaccines to protect animals from flea infestation
IN ***Grieve, Robert B.*** ; Rushlow, Keith E.; Hunter, Shirley Wu; Frank, Glenn R.; Heath, Andrew; Yamanaka, Miles; Arfsten, Ann; Dale, Beverly
PA Heska Corporation, USA
SO U.S., 27 pp. Cont.-in-part of U.S. 5,356,622.
CODEN: USXXAM
DT Patent
LA English

FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5766609	A	19980616	US 1994-326773	19941018
US 5356622	A	19941018	US 1991-806482	19911213
WO 9311790	A1	19930624	WO 1992-US10671	19921210
W: AU, JP, NZ				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9332470	A1	19930719	AU 1993-32470	19921210
US 5712143	A	19980127	US 1995-485455	19950607
US 5962257	A	19991005	US 1995-482130	19950607
US 5972645	A	19991026	US 1995-484211	19950607
US 6146870	A	20001114	US 1995-485443	19950607
CA 2202622	AA	19960425	CA 1995-2202622	19951018
WO 9611706	A1	19960425	WO 1995-US14442	19951018
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9641038	A1	19960506	AU 1996-41038	19951018
AU 705715	B2	19990527		
ZA 9508804	A	19960613	ZA 1995-8804	19951018
EP 787014	A1	19970806	EP 1995-939081	19951018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10507455	T2	19980721	JP 1995-513499	19951018
US 6150125	A	20001121	US 1996-639075	19960424
US 6077687	A	20000620	US 1997-906769	19970805
US 6121035	A	20000919	US 1997-906616	19970805

PRAI US 1991-806482 19911213
WO 1992-US10671 19921210
US 1994-326773 19941018
US 1995-482130 19950607
US 1995-484211 19950607
US 1995-485443 19950607
US 1995-485455 19950607
WO 1995-US14442 19951018
US 1996-639075 19960424
US 1998-485443 19980607

AB A method to protect a host animal from flea infestation by treating that animal with a compn. that includes a compd. that reduces protease activity of fleas feeding from the treated animal, thereby reducing flea burden on the animal and in the environment of the animal. The present invention also relates to compns. including flea protease vaccines, anti-flea protease antibodies and/or protease inhibitors. Also included in the present invention are sol. flea midgut prepns., flea protease proteins, nucleic acid mols. encoding such proteins and antibodies that selectively bind to such proteins. The present invention also includes methods to obtain and use such prepns., proteins, nucleic acid mols., antibodies and protease inhibitors to protect an animal from flea infestation.

L6 ANSWER 18 OF 66 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 11
AN 1998:115346 CAPLUS

DN 128:151103
TI Proteinases of fleas and the genes encoding them and their use in protecting animals from flea infestation
IN ***Grieve, Robert B.*** ; Rushlow, Keith E.; Hunter, Shirley Wu; Frank, Glenn R.; Stiegler, Gary L.
PA Heska Corp., USA
SO U.S., 63 pp. Cont.-in-part of U.S. Ser. No. 326,773.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5712143	A	19980127	US 1995-485455	19950607
US 5356622	A	19941018	US 1991-806482	19911213
AU 9332470	A1	19930719	AU 1993-32470	19921210
US 5766609	A	19980616	US 1994-326773	19941018
CA 2202622	AA	19960425	CA 1995-2202622	19951018
WO 9611706	A1	19960425	WO 1995-US14442	19951018
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9641038	A1	19960506	AU 1996-41038	19951018
AU 705715	B2	19990527		
EP 787014	A1	19970806	EP 1995-939081	19951018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10507455	T2	19980721	JP 1995-513499	19951018
US 6150125	A	20001121	US 1996-639075	19960424
US 6077687	A	20000620	US 1997-906769	19970805
US 6121035	A	20000919	US 1997-906616	19970805

PRAI US 1991-806482 19911213
US 1994-326773 19941018
WO 1992-US10671 19921210
US 1995-482130 19950607
US 1995-484211 19950607
US 1995-485443 19950607
US 1995-485455 19950607
WO 1995-US14442 19951018
US 1996-639075 19960424
US 1998-485443 19980607

AB Serine proteinases and aminopeptidases from the midgut of fleas (Siphonaptera) are characterized and genes encoding them cloned. Antibodies against these proteinases and inhibitors for use in the control of flea infestation are described. The characterization of a no. of proteinases from the flea midgut is demonstrated. The serine proteinases were also the major proteinase of feces. Inhibitors of these proteinase lowered the fecundity of female fleas. The proteinases were also effectives as antigens in vaccines against fleas.

L6 ANSWER 19 OF 66 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 12
AN 1998:51527 CAPLUS

DN 128:114030
TI Carbohydrate-based vaccine and diagnostic reagent for trichinosis
IN Wisnewski, Nancy; ***Grieve, Robert B.*** ; Wassom, Donald L.; McNeil, Michael R.
PA Colorado State University Research Foundation, USA
SO U.S., 17 pp. Cont.-in-part of U.S. 5,541,075.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5707817	A	19980113	US 1995-415365	19950331
US 5541075	A	19960730	US 1993-14449	19930205
US 5686256	A	19971111	US 1995-459303	19950602
WO 9630044	A1	19961003	WO 1996-US4349	19960328
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
CA 2215529	AA	19961003	CA 1996-2215529	19960328
AU 9653793	A1	19961016	AU 1996-53793	19960328

PRAI US 1993-14449 19930205
US 1995-415365 19950331
WO 1996-US4349 19960328
AB The present invention relates to Trichinella diagnostic reagents that include a .beta.-tyvelose-contg. compn. and use of such reagents to detect Trichinella, and particularly Trichinella spiralis infections. The present invention also includes diagnostic kits based on such reagents and therapeutic agents based on the knowledge that .beta.-tyvelose is produced by Trichinella spiralis parasites. The .beta.-tyvelose-contg. compn. comprises .beta.-tyvelose joined through glycosidic linkage to a monosaccharide to form oligosaccharide.

L6 ANSWER 20 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1998:197685 CAPLUS
DN 128:281707
TI Method to detect Dirofilaria immitis infection
IN ***Grieve, Robert B.*** ; Frank, Glenn R.; Mondesire, Roy R.; Porter, James P.; Wisnewski, Nancy
PA Heska Corporation, USA
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9812563	A1	19980326	WO 1997-US16535	19970918
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR. TT, UA, UG, UZ,				

VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
AU 9743537 A1 19980414 AU 1997-43537 19970918
EP 934529 A1 19990811 EP 1997-941677 19970918
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
PRAI US 1996-715628 19960918
WO 1997-US16535 19970918
AB The present invention includes a method to detect D. immitis infection in a host animal using a D. immitis Di33 protein to detect anti-D. immitis Di33 antibodies in a bodily fluid of the animal. Also included is a method to detect D. immitis infection in a host animal using a D. immitis anti-Di33 protein to detect Di33 proteins in a bodily fluid of the animal. The present invention also relates to D. immitis detection kits that include either a Di33 protein or an anti-Di33 antibody; such kits also include a compn. to detect an immunocomplex between the anti-Di33 antibody and D. immitis Di33 protein. The present invention also includes Di33 proteins, nucleic acid mols. encoding such proteins, as well as recombinant mols. and recombinant cells comprising such nucleic acid mols., and anti-Di33 antibodies. Also included are methods to produce such proteins, nucleic acid mols. and antibodies.

L6 ANSWER 21 OF 66 USPATFULL
AN 1998:108039 USPATFULL
TI Parasitic nematode proteins and vaccines
IN ***Grieve, Robert B.*** , La Porte, CO, United States
Frank, Glenn R., Fort Collins, CO, United States
PA Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5804200 19980908
AI US 1995-408120 19950320 (8)
RLI Continuation of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned
DT Utility
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 71 Drawing Figure(s); 36 Drawing Page(s)
LN.CNT 2318
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Immunogens derived from proteins isolatable from the L3 and L4 larval stages of nematodes parasitic in mammals, and including a protein of about 20.5 kD, are disclosed. The proteins of the invention are identified using biological materials verified to destroy or impair the parasitic nematode in an in vivo incubator. Cells, serum or fractions thereof obtained from immune natural hosts are validated in a method wherein a recoverable implant of the parasitic nematodes is used to assess the protective effect when these materials are provided passively to the animal incubator.

L6 ANSWER 22 OF 66 USPATFULL
AN 1998:68533 USPATFULL
TI Recombinant packaging defective Sindbis virus vaccines
IN Xiong, Cheng, Ft. Collins, CO, United States
Grieve, Robert B. , Ft. Collins, CO, United States
PA Heska Corporation, Fort Collins, CO, United States (U.S. corporation)
PI US 5766602 19980616
AI US 1995-375235 19950119 (8)
RLI Continuation of Ser. No. US 1993-15414, filed on 8 Feb 1993
DT Utility
EXNAM Primary Examiner: Achutamurthy, Ponnathapura; Assistant Examiner: Bui, Phuong T.
CLMN Number of Claims: 57
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1902
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is directed toward a recombinant virus particle vaccine comprising a recombinant molecule packaged in an alphavirus coat. A preferred recombinant molecule of the present invention comprises a nucleic acid sequence that encodes a protective compound (e.g. a protective protein or a protective RNA) capable of protecting an animal from a disease, such that the nucleic acid sequence is operatively linked to a packaging-defective alphavirus expression vector that is capable of directing replication and transcription of the recombinant molecule. The invention also includes methods to produce and use such vaccines to protect animals from disease, particularly from disease caused by protozoan parasites such as Toxoplasma gondii, helminth parasites, ectoparasites, fungi, bacteria, or viruses.

L6 ANSWER 23 OF 66 USPATFULL
AN 1998:51474 USPATFULL
TI Filariid nematode cysteine protease proteins
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn R., Ft. Collins, CO, United States
Grieve, Robert B. , Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5750391 19980512
AI US 1995-463989 19950605 (8)
RLI Continuation of Ser. No. US 1994-249552, filed on 26 May 1994, now abandoned
DT Utility
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai
LREP Sheridan Ross P.C.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2683
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasite astacin metalloendopeptidase and filariid cysteine protease proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and compounds that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The present invention also includes methods to obtain such nucleic acid molecules,

proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasites, such as heartworm.

L6 ANSWER 24 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 13
AN 1998:165443 BIOSIS
DN PREV199800165443
TI Dirofilaria immitis: Molecular cloning and expression of a cDNA encoding a selenium-independent secreted glutathione peroxidase.
AU Tripp, Cindy (1); Frank, Rexann S.; Selkirk, Murray E.; Tang, Liang; Grieve, Marcia M.; Frank, Glenn R.; ***Grieve, Robert B.***
CS (1) Heska Corp., 1835 Sharp Point Dr., Fort Collins, CO 80525 USA
SO Experimental Parasitology, (Jan., 1998) Vol. 88, No. 1, pp. 43-50. ISSN: 0014-4894.
DT Article
LA English
AB A cDNA clone, Di29, encoding a homolog of glutathione peroxidase, was isolated from a Dirofilaria immitis adult female cDNA expression library by a combination of polymerase chain reaction amplification with primers designed from the Brugia pahangi glutathione peroxidase gene sequence and hybridization screening of D. immitis cDNA libraries. The Di29 nucleotide and deduced amino acid sequences were very similar to those described for lymphatic filariae and predicted a secreted form of glutathione peroxidase with a cysteine residue substituted for selenocysteine in the active site. The cDNA clone was expressed in Escherichia coli and Spodoptera frugiperda Sf9 insect cells, and the resulting recombinant proteins were purified for antibody production and assessment of enzymatic properties, respectively. An antiserum generated against the E. coli-expressed protein detected a protein of 29 kDa in D. immitis via immunoblotting. This protein is expressed in adult worms (both sexes) and fourth stage larvae generated via 6 days of in vitro culture, but was undetectable in microfilariae, and third stage larvae obtained either directly from mosquitoes or following 2 days of culture. The Di29-encoded recombinant protein was secreted from Sf9 insect cells and displayed low-level glutadione peroxidase activity against a range of hydroperoxide substrates, including hydrogen peroxide.

L6 ANSWER 25 OF 66 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 14
AN 1997:436582 CAPLUS
DN 127:107982
TI Parasitic helminth proteins of Dirofilaria immitis, cDNA cloning, and their use to prevent heartworm infection
IN Tripp, Cynthia Ann; Frank, Glenn Robert; ***Grieve, Robert B.***
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 28 pp. Cont.-in-part of U.S. Ser. No. 3,257, abandoned. CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5639876	A	19970617	US 1993-109391	19930819
CA 2153494	AA	19940721	CA 1994-2153494	19940112
WO 9415593	A1	19940721	WO 1994-US679	19940112

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU,

JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
AU 9461254 A1 19940815 AU 1994-61254 19940112
EP 680316 A1 19951108 EP 1994-907845 19940112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE
JP 08505772 T2 19960625 JP 1994-516380 19940112
US 5686080 A 19971111 US 1995-459019 19950602
US 5912337 A 19990615 US 1995-460428 19950602
US 6100390 A 20000808 US 1995-458860 19950602
US 5977306 A 19991102 US 1995-487031 19950606
US 6099843 A 20000808 US 1995-483474 19950607
AU 9864878 A1 19980827 AU 1998-64878 19980512
PRAI US 1991-654226 19910212
US 1993-3257 19930112
US 1993-3389 19930112
US 1993-101283 19930803
US 1993-109391 19930819
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320

AB Parasitic helminth nucleic acid sequences capable of hybridizing to at least a portion of the nucleic acid sequence encoding p4 or p22U of Dirofilaria immitis are provided. The p4-encoding nucleic acid sequence is about 913 nucleotides in length and comprises an open reading frame of 303 amino acids which has an LDL receptor-related protein class A cysteine-rich motif of 9 amino acids. The p4 nucleic acid was isolated from a D. immitis L3 and/or L4 cDNA expression library using immune serum collected from a dog that was immunized by repeated chem. abbreviated infections. The p22U nucleic acid encodes at least a substantial portion of the P22U protein, which has been identified in larval excretory-secretory exts. as well as in exts. of L3,L4 and adults. The parasitic helminth proteins are capable of selectively binding to .gtoreq.1 components of immune serum and thus inhibiting helminth development. Antibodies against such isolated parasitic helminth proteins are also raised. Therapeutic compn.s contg. such isolated nucleic acid sequences, proteins, and/or antibodies are provided. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies, and therapeutic compns. capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L6 ANSWER 26 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1997:717928 CAPLUS
DN 128:19382
TI DNA cloning and sequences for flea proteases and their uses to control flea infestation
IN ***Grieve, Robert B.*** ; Rushlow, Keith E.; Hunter, Shirley Wu; Frank, Glenn R.; Steigler, Gary L.; Gaines, Patrick J.; Silver, Gary
PA Heska Corp., USA; Grieve, Robert B.; Rushlow, Keith E.; Hunter, Shirley Wu; Frank, Glenn R.; Steigler, Gary L.; Gaines, Patrick J.; Silver, Gary
SO PCT Int. Appl., 318 pp.
CODEN: PIXXD2
DT Patent

LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9740058	A1	19971030	WO 1997-US6121	19970424
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6150125	A	20001121	US 1996-639075	19960424
CA 2252581	AA	19971030	CA 1997-2252581	19970424
AU 9728015	A1	19971112	AU 1997-28015	19970424
EP 900231	A1	19990310	EP 1997-922303	19970424
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRAI US 1996-639075 19960424
US 1996-749699 19961115
US 1997-42945 19970404
US 1991-806482 19911213
US 1994-326773 19941018
US 1995-482130 19950607
US 1995-484211 19950607
US 1995-485455 19950607
WO 1997-US6121 19970424
US 1998-485443 19980607

AB Nucleic acid sequences encoding aminopeptidases, cysteine proteases, and serine proteases are cloned, isolated, and sequenced, and characterized from fleas isolated from various animal sources and at various developmental stages. Std. PCR techniques using degenerate oligonucleotide primers were used to clone the nucleic acids. Certain of the serine proteases are shown to cleave cat IgG, IgA, and IgM as well as bovine, dog, human, and rabbit IgG. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies, and inhibitors. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., antibodies, and/or inhibitors as well as the use of such therapeutic compns. to protect a host animal from flea infestation.

L6 ANSWER 27 OF 66 USPATFULL
AN 97:109749 USPATFULL
TI Filariid cysteine protease genes
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn R., Ft. Collins, CO, United States
Grieve, Robert B. , Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5691186 19971125
AI US 1995-463262 19950605 (8)
RLI Continuation of Ser. No. US 1994-249552, filed on 26 May 1994, now abandoned
DT Utility
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai

LREP Ross P.C., Sheridan
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2667
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasite astacin metalloendopeptidase and filariid cysteine protease proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and compounds that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasites, such as heartworm.

L6 ANSWER 28 OF 66 USPATFULL
AN 97:104288 USPATFULL
TI Carbohydrate-based vaccine and diagnostic reagent for trichinosis
IN Wisnewski, Nancy, Ft. Collins, CO, United States
Grieve, Robert B. , Ft. Collins, CO, United States
Wassom, Donald L., Ft. Collins, CO, United States
McNeil, Michael R., Ft. Collins, CO, United States
PA Colorado State University Research Foundation, Fort Collins, CO, United States (U.S. corporation)
PI US 5686256 19971111
AI US 1995-459303 19950602 (8)
RLI Continuation of Ser. No. US 1993-14449, filed on 5 Feb 1993, now patented, Pat. No. US 5541075
DT Utility
EXNAM Primary Examiner: Hutzell, Paula K.; Assistant Examiner: Masood, Khalzd
LREP Sheridan Ross P.C.
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1642
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to Trichinella diagnostic reagents that include at least one tyvelose-containing oligosaccharide, or functional equivalent thereof, and use of such reagents to detect Trichinella, and particularly Trichinella spiralis infections. The present invention also includes diagnostic kits based on such reagents and anti-Trichinella spiralis drugs based on the knowledge that tyvelose is produced by Trichinella spiralis parasites.

L6 ANSWER 29 OF 66 USPATFULL
AN 97:104113 USPATFULL
TI Parasitic helminth p4 proteins
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn Robert, Ft. Collins, CO, United States
Grieve, Robert B. , Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)

PI US 5686080 19971111
AI US 1995-459019 19950602 (8)
RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation-in-part of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. Ser. No. US 1993-3389, filed on 12 Jan 1993, now abandoned And Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US -3257 And Ser. No. US -3389 , each Ser. No. US - which is a continuation-in-part of Ser. No. US -654226
DT Utility
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2279
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to isolated parasitic helminth nucleic acid sequences capable of hybridizing, under stringent conditions, to at least a portion of D. immitis nucleic acid sequence p4 and/or to at least a portion of D. immitis nucleic acid sequence p22U; to isolated parasitic helminth proteins that are encoded by such parasitic helminth nucleic acid sequences and that are capable of selectively binding to at least one component of immune serum capable of inhibiting helminth development; and to antibodies raised against such isolated parasitic helminth proteins. The present invention also relates to therapeutic compositions comprising such isolated nucleic acid sequences, proteins and/or antibodies. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compositions capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L6 ANSWER 30 OF 66 USPATFULL
AN 97:29198 USPATFULL
TI Dirofilaria immitis Gp29 proteins and uses thereof
IN Tripp, Cynthia A., Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B. , Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5618532 19970408
AI US 1995-462177 19950605 (8)
RLI Continuation of Ser. No. US 1994-208885, filed on 8 Mar 1994, now patented, Pat. No. US 5569603
DT Utility
EXNAM Primary Examiner: Hendricks, Keith D.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 16
ECL Exemplary Claim: 15
DRWN No Drawings
LN.CNT 1784
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to D. immitis Gp29 proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and inhibitors of D. immitis glutathione peroxidase. The present invention also includes methods to obtain such

nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasitic helminths, such as heartworm.

L6 ANSWER 31 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1997:124448 CAPLUS
DN 126:127883
TI Cloning of filariid nematode cysteine protease cDNA, treatment of infection, and assays for inhibitors of the protease
IN Wisnewski, Nancy; ***Grieve, Robert B.*** ; Frank, Glenn R.; Tripp, Cynthia Ann
PA Colorado State University Research Foundation, USA; Heska Corporation; Wisnewski, Nancy; Grieve, Robert B.; Frank, Glenn R.; Tripp, Cynthia Ann
SO PCT Int. Appl., 115 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9640884	A1	19961219	WO 1996-US9848	19960607
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
US 5795768	A	19980818	US 1995-486036	19950607
AU 9661678	A1	19961230	AU 1996-61678	19960607
AU 713837	B2	19991209		
EP 846165	A1	19980610	EP 1996-919309	19960607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT				
JP 11507820	T2	19990713	JP 1996-502047	19960607

PRAI US 1995-486036 19950607
US 1991-654226 19910212
US 1991-792209 19911112
US 1993-101283 19930803
US 1993-153554 19931116
WO 1996-US9848 19960607

AB The present invention provides for filariid cysteine protease proteins; to filariid nematode cysteine protease nucleic acid mols., in particular, Dirofilaria immitis L3 larval cysteine protease nucleic acid mols. and Onchocerca volvulus L3 larval cysteine protease nucleic acid mols.; to antibodies raised against such proteins, and to compds. that inhibit filariid nematode cysteine protease activity. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies and/or inhibitors. The present invention also includes therapeutic compns. comprising such proteins, nucleic acid mols., antibodies and/or inhibitors, and the use of such compns. to protect an animal from disease caused by parasitic helminths. The cDNA's for Dirofilaria immitis and Onchocerca volvulus cysteine proteinase were cloned, sequenced, and expressed in bacteria, insect cells, and mammalian cells.

L6 ANSWER 32 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1996:708168 CAPLUS
DN 125:326403
TI Carbohydrate-based vaccine and diagnostic reagent for trichinosis
IN Wisnewski, Nancy; ***Grieve, Robert B.*** ; Wassom, Donald L.; Mcneil, Michael R.
PA Colorado State University Research Foundation, USA
SO PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9630044	A1	19961003	WO 1996-US4349	19960328
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
US 5707817	A	19980113	US 1995-415365	19950331
AU 9653793	A1	19961016	AU 1996-53793	19960328

PRAI US 1995-415365 19950331
US 1993-14449 19930205
WO 1996-US4349 19960328
AB Trichinella vaccines that include a .beta.-tyvelose-conig. compn. are used to protect animals from Trichinella infections, esp. from trichinosis caused by T. spiralis infection, based on the knowledge that .beta.-tyvelose is produced by T. spiralis. Such vaccines can also be used to produce antibodies that are capable of protecting an animal from Trichinella infections and of diagnosing such infections. Thus, the sugars identified in T. spiralis TSL-1 antigens, excretory-secretory antigens, and L1 larval homogenates were tyvelose, fucose, xylose (not found in TSL-1 antigens), mannose, galactose, glucose, N-acetylgalactosamine, and N-acetylglucosamine. .beta.-Tyvelose-N-acetylgalactosamine competed with TSL-1 antigens for binding to monoclonal antibody Tsp 130.

L6 ANSWER 33 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1996:422430 CAPLUS
DN 125:108868
TI Proteinases of fleas and the genes encoding them and their use in protecting animals from flea infestation
IN ***Grieve, Robert B.*** ; Rushlow, Keith E.; Hunter Shirley Wu; Frank, Glenn R.; Stiegler, Gary L.; Heath, Andrew; Yamanaka, Miles; Arfsten, Ann; Dale, Beverly
PA Heska Corporation, USA
SO PCT Int. Appl., 240 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 9611706 A1 19960425 WO 1995-US14442 19951018
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
US 5356622 A 19941018 US 1991-806482 19911213
AU 9332470 A1 19930719 AU 1993-32470 19921210
US 5766609 A 19980616 US 1994-326773 19941018
US 5712143 A 19980127 US 1995-485455 19950607
US 5962257 A 19991005 US 1995-482130 19950607
US 5972645 A 19991026 US 1995-484211 19950607
US 6146870 A 20001114 US 1995-485443 19950607
AU 9641038 A1 19960506 AU 1996-41038 19951018
AU 705715 B2 19990527
EP 787014 A1 19970806 EP 1995-939081 19951018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
JP 10507455 T2 19980721 JP 1995-513499 19951018
US 6139840 A 20001031 US 1997-817795 19970801
US 6077687 A 20000620 US 1997-906769 19970805
US 6121035 A 20000919 US 1997-906616 19970805
PRAI US 1994-326773 19941018
US 1995-484211 19950607
US 1995-482130 19950607
US 1995-485443 19950607
US 1995-485455 19950607
US 1991-806482 19911213
WO 1992-US10671 19921210
WO 1995-US14442 19951018
US 1996-639075 19960424
AB Serine proteinases and aminopeptidases from the midgut of fleas (Siphonaptera) are characterized and genes encoding them cloned. Antibodies against these proteinases and inhibitors for use in the control of flea infestation are described. The characterization of a no. of proteinases from the flea midgut is demonstrated. The serine proteinases were also the major proteinase of feces. Inhibitors of these proteinase lowered the fecundity of female fleas. The proteinases were also effectives as antigens in vaccines against fleas.

L6 ANSWER 34 OF 66 USPATFULL
AN 96:99157 USPATFULL
TI Dirofilaria immitis GP29 proteins, nucleic acid molecules and uses thereof
IN Tripp, Cynthia A., Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B. , Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5569603 19961029
AI US 1994-208885 19940308 (8)
DT Utility
EXNAM Primary Examiner: Hendricks, Keith D.
LREP Sheridan Ross & McIntosh
CLMN Number of Claims: 9

ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1766
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to D. immitis Gp29 proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and inhibitors of D. immitis glutathione peroxidase. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasitic helminths, such as heartworm.

L6 ANSWER 35 OF 66 USPATFULL
AN 96:67897 USPATFULL
TI Carbohydrate-based vaccine and diagnostic reagent for trichinosis
IN Wisnewski, Nancy, Fort Collins, CO, United States
Grieve, Robert B. , Fort Collins, CO, United States
Wassom, Donald L., Fort Collins, CO, United States
McNeil, Michael R., Fort Collins, CO, United States
PA Heska Corporation, Fort Collins, CO, United States (U.S. corporation)
PI US 5541075 19960730
AI US 1993-14449 19930205 (8)
DT Utility
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Krsek-Staples, Julie
LREP Sheridan Ross & McIntosh
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1544
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to Trichinella vaccines that include at least one tyvelose-containing oligosaccharide or functional equivalent thereof, to Trichinella vaccines that include at least one fucose-containing oligosaccharide or functional equivalent thereof, and to the use of such vaccines to protect animals from Trichinella infections, and particularly from trichinosis caused by Trichinella spiralis infection. Such vaccines can also be used to produce antibodies that are capable of protecting an animal from Trichinella infections and of diagnosing such infections. The present invention also relates to Trichinella diagnostic reagents that include at least one tyvelose-containing oligosaccharide, or functional equivalent thereof, and use of such reagents to detect Trichinella, and particularly Trichinella spiralis infections. The present invention also includes diagnostic kits based on such reagents and anti-Trichinella-spiralis drugs based on the knowledge that tyvelose is produced by Trichinella spiralis parasites.

L6 ANSWER 36 OF 66 USPATFULL
AN 96:14597 USPATFULL
TI Vaccinating cats against Dirofilaria immitis with an L4 homogenate
IN ***Grieve, Robert B.*** , La Porte, CO, United States
Frank, Glenn, Fort Collins, CO, United States

PA Colorado State University Research Foundation, Fort Collins, CO, United States (U.S. corporation)
PI US 5492695 19960220
AI US 1992-882790 19920514 (7)
DT Utility
EXNAM Primary Examiner: Mosher, Mary E.; Assistant Examiner: Caputa, Anthony C.
LREP Sheridan Ross & McIntosh
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 536
AB It has been found that hosts which are susceptible to nematode parasite infections can readily be protected from such infections when the parasites are not adapted for a parasite/host relationship to this host. In particular, feline hosts were immunized against heartworm using a variety of antigens derived from Dirofilaria immitis and related nematodes. Because cats are hosts susceptible to this nonadapted parasite, such antigens are successfully protective.

L6 ANSWER 37 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 15
AN 1996:231792 BIOSIS
DN PREV199698795921
TI Molecular cloning of a developmentally regulated protein isolated from excretory-secretory products of larval Dirofilaria immitis.
AU Frank, Glenn R. (1); Tripp, Cynthia A.; ***Grieve, Robert B.***
CS (1) Paravax, Inc., 1825 Sharp Point Drive, Fort Collins, CO 80525 USA
SO Molecular and Biochemical Parasitology, (1996) Vol. 75, No. 2, pp. 231-240.
ISSN: 0166-6851.
DT Article
LA English
AB Three proteins isolated from the excretory-secretory products (ES) of larval Dirofilaria immitis have been previously characterized and termed the 20, 22L and 22U kDa proteins. Two of the proteins (20 and 22L) were produced and released around the time of the third molt and were specifically recognized by immune dog sera. An amino acid sequence common to both proteins was used to synthesize a DNA probe to molecularly clone these molecules from a 48-h third stage larval cDNA library. The DNA sequence of the isolated clones encoded a 17.5 kDa protein with a 21 amino acid hydrophobic leader sequence that when removed yielded a 15.3 kDa protein starting with the N-terminal sequence obtained from the 20 kDa protein and containing all sequences obtained from tryptic peptides of the 20 and 22L kDa proteins. It was hypothesized that the 20 and 22L kDa proteins were the same, differing only by a 21 amino acid hydrophobic leader sequence which was later cleaved. The calculated molecular masses were consistent with those determined by reducing Tris-tricine SDS-PAGE. Expression of the protein without the leader sequence was accomplished in Escherichia coli. Antiserum raised against the expressed protein demonstrated the presence of the protein in L3 and L4, but not in adults or microfilariae. Expression of the protein with the leader sequence using a baculovirus system demonstrated processing of the signal sequence at the same site as found in larval D. immitis ES. Sera from dogs immune to infection were reactive with the D. immitis proteins expressed in either E. coli or insect cells.

L6 ANSWER 38 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 16
AN 1996:231791 BIOSIS
DN PREV199698795920
TI Purification and characterization of three larval excretory-secretory proteins of Dirofilaria immitis.
AU Frank, Glenn R. (1); ***Grieve, Robert B.***
CS (1) Paravax, Inc., 1825 Sharp Point Drive, Fort Collins, CO 80525 USA
SO Molecular and Biochemical Parasitology, (1996) Vol. 75, No. 2, pp. 221-229.
ISSN: 0166-6851.
DT Article
LA English
AB Two proteins were previously described in the excretory-secretory products (ES) collected from Dirofilaria immitis during the molt from the third stage to the fourth stage in vitro. The two proteins were purified using cation exchange and reverse phase HPLC. During the purification of these two proteins, a third protein was identified that co-migrated with one of the others during previous gel analysis. All three had molecular masses of 20-23 kDa as determined by Tris-glycine SDS-PAGE and have been designated 20, 22L and 22U kDa proteins. The three proteins were digested with trypsin. Amino acid sequences were subsequently determined for four peptides and the N-terminus of the 20 kDa protein, five peptides of the 22L kDa protein and three peptides of the 22U kDa protein. The 20 and 22L kDa proteins were quite similar based on sequence and purification characteristics. The 22U kDa protein, but not the 20 and 22L kDa proteins, was also identified in adult worms using tryptic mapping and amino acid sequencing techniques. Immunoblot analysis demonstrated that the 20 and 22L kDa proteins were specifically recognized by sera from dogs immune to infection by D. immitis but not by sera from infected non-immune dogs. The 22U kDa protein was weakly recognized by the same immune sera but not by the infected non-immune dog sera. Since the 20 and 22L kDa proteins appear to be larval specific, associated in time with the molt from L3 to L4 and are specifically recognized by immune dog sera, they are good vaccine candidates.

L6 ANSWER 39 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1996:134110 CAPLUS
DN 124:169381
TI Cloning of cDNA for parasitic proteases and their uses for preparing anti-parasite agents
IN Tripp, Cynthia Ann; Frank, Glenn R.; ***Grieve, Robert B.***
PA Paravax, Inc., USA
SO PCT Int. Appl., 120 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9532988	A1	19951207	WO 1995-US6685	19950525

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT

RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

CA 2189741 AA 19951207 CA 1995-2189741 19950525
AU 9526516 A1 19951221 AU 1995-26516 19950525
AU 702915 B2 19990311
EP 766693 A1 19970409 EP 1995-921435 19950525
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE
JP 10500854 T2 19980127 JP 1995-530582 19950525
US 5691186 A 19971125 US 1995-463262 19950605
US 5750391 A 19980512 US 1995-463989 19950605
AU 9923904 A1 19990617 AU 1999-23904 19990421

PRAI US 1994-249552 19940526
AU 1995-26516 19950525
WO 1995-US6685 19950525

AB The cDNAs encoding astacin metalloendopeptidase protein of Dirofilaria immitis (heartworm) and filariid cysteine protease protein are isolated and characterized., nucleic acid mols. having sequences that encode such proteins, antibodies raised against such proteins and compds. that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The cDNA can be used for the prodn. of the proteins and the antibodies against the proteins. The cDNAs and the antibodies are useful in the prepn. of anti-parasite compns.

L6 ANSWER 40 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1995:973629 CAPLUS
DN 124:7055
TI Dirofilaria immitis Gp29 proteins and nucleic acid molecules encoding them for vaccine production
IN Tripp, Cynthia Ann; Selkirk, Murray E.; ***Grieve, Robert B.***
PA Paravax, Inc., USA
SO PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9524198	A1	19950914	WO 1995-US2941	19950307

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 5569603 A 19961029 US 1994-208885 19940308
CA 2183963 AA 19950914 CA 1995-2183963 19950307
AU 9519856 A1 19950925 AU 1995-19856 19950307
EP 749312 A1 19961227 EP 1995-912824 19950307
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE
JP 09510102 T2 19971014 JP 1995-523643 19950307
US 5618532 A 19970408 US 1995-462177 19950605
US 5866126 A 19990202 US 1997-833622 19970408

PRAI US 1994-208885 19940308

WO 1995-US2941 19950307
US 1995-462177 19950605

AB Gp29 protein (glutathione peroxidase) is produced by D. immitis L3, L4, and adult stages and may protect the heartworms from oxidants produced by the host's cellular immune system, e.g. the oxidative H2O2 burst of leukocytes and secondary products of lipid peroxidn. Recombinant nucleic acid mols. encoding Gp29 proteins are provided for prodn. of vaccines which elicit formation of antibodies to neutralize D. immitis glutathione peroxidase and to protect animals from disease caused by parasitic helminths, such as heartworms.

L6 ANSWER 41 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1996:344179 BIOSIS
DN PREV199699066535
TI Vaccine research and development for the prevention of filarial nematode infections.
AU ***Grieve, Robert B.*** ; Wisnewski, Nancy; Frank, Glenn R.; Tripp, Cynthia A.
CS Paravax Inc., Fort Collins, CO 80525 USA
SO Powell, M. F. [Editor]; Newman, M. J. [Editor]. (1995) pp. 737-768. Pharmaceutical Biotechnology, Vol. 6; Vaccine design: The subunit and adjuvant approach.
Publisher: Plenum Press 233 Spring Street, New York, New York, USA.
ISBN: 0-306-44867-X.
DT Book
LA English

L6 ANSWER 42 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1994:638394 CAPLUS
DN 121:238394
TI Carbohydrate-based vaccine and diagnostic reagent for trichinosis
IN Wisnewski, Nancy; ***Grieve, Robert B.*** ; Wassom, Donald L.; McNeil, Michael R.
PA Colorado State University Research Foundation, USA
SO PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9417824	A1	19940818	WO 1994-US1045	19940127
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5541075	A	19960730	US 1993-14449	19930205
AU 9461297	A1	19940829	AU 1994-61297	19940127
EP 682527	A1	19951122	EP 1994-907915	19940127
R: AT, BE, CH, DE, DK, ES, FR, GB, IE, IT, LI, NL, SE				
US 5686256	A	19971111	US 1995-459303	19950602

PRAI US 1993-14449 19930205
WO 1994-US1045 19940127

AB The present invention relates to Trichinella vaccines that include at

least one tyvelose- or fucose-contg. oligosaccharide or functional equiv. thereof, and to the use of such vaccines to protect animals from Trichinella infections, and particularly from trichinosis caused by Trichinella spiralis. Such vaccines can also be used to produce antibodies that are capable of protecting an animal from Trichinella infections and of diagnosing such infections. The present invention also relates to Trichinella diagnostic reagents that include at least one tyvelose-contg. oligosaccharide, or functional equiv. thereof, and use of such reagents to detect Trichinella, and particularly Trichinella spiralis infections. The present invention also includes diagnostic kits based on such reagents and anti-Trichinella spiralis drugs based on the knowledge that tyvelose is produced by Trichinella spiralis parasites.

L6 ANSWER 43 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1994:699107 CAPLUS
DN 121:299107
TI Defective Sindbis virus expression vectors for manufacture of Toxoplasma gondii p30 antigens for vaccines
IN ***Grieve, Robert B.*** ; Xiong, Cheng
PA Paravax, Inc., USA
SO PCT Int. Appl., 128 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9417813	A1	19940818	WO 1994-US1398	19940208
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9461721	A1	19940829	AU 1994-61721	19940208
US 5766602	A	19980616	US 1995-375235	19950119
PRAI US 1993-15414		19930208		
WO 1994-US1398		19940208		

AB Alphavirus expression vectors for genes for protective antigens are described. The expression vector is derived from a packaging-defective alphavirus that can be packaged into viral particles for use in the infection of target cells. These expression constructs can be used in vaccines, particularly against protozoan parasites such as Toxoplasma gondii, helminth parasites, ectoparasites, fungi, bacteria, or viruses. The construction of expression cassettes for truncated derivs. of the p30 antigen gene using the Sindbis virus expression vector TRCAT62 is described. Methods for construction of packaging lines, packaging of the expression vector and for testing vaccine effectiveness are discussed. Effectiveness of a comparable heartworm vaccine is demonstrated.

L6 ANSWER 44 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1995:130543 CAPLUS
DN 122:7946
TI Parasitic helminth proteins of Dirofilaria immitis and cDNA cloning
IN ***Grieve, Robert B.*** ; Frank, Glenn R.; Mika-Grieve, Marcia; Tripp, Cynthia Ann

PA Paravax, Inc., USA; Colorado State University Research Foundation
SO PCT Int. Appl., 153 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9415593	A1	19940721	WO 1994-US679	19940112
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5639876	A	19970617	US 1993-109391	19930819
AU 9461254	A1	19940815	AU 1994-61254	19940112
EP 680316	A1	19951108	EP 1994-907845	19940112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE				
JP 08505772	T2	19960625	JP 1994-516380	19940112
US 5977306	A	19991102	US 1995-487031	19950606
US 6114142	A	20000905	US 1995-473034	19950606
US 6060281	A	20000509	US 1995-482304	19950607
US 6099843	A	20000808	US 1995-483474	19950607

PRAI US 1993-3257 19930112
US 1993-3389 19930112
US 1993-109391 19930819
US 1991-654226 19910212
US 1993-101283 19930803
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320

AB Parasitic helminth nucleic acid sequences capable of hybridizing to at least a portion of nucleic acid sequence p4, p22U, P39, P22L and or P20.5 of Dirofilaria immitis are provided. The parasitic helminth proteins are capable of selectively binding to .gtoreq.1 components of immune serum and thus inhibiting helminth development. Antibodies against such isolated parasitic helminth proteins are also raised. Therapeutic compns. contg. such isolated nucleic acid sequences, proteins and/or antibodies are claimed. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compns. capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L6 ANSWER 45 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1996:136230 BIOSIS
DN PREV199698708365
TI Survey of heartworm (Dirofilaria immitis) infection in Colorado dogs: A model for surveying prevalence in low-endemic areas.
AU Frank, Glenn R. (1); ***Grieve, Robert B. (1)*** ; Mok, Meisen (1); Smart, Debra J.; Salman, Mowafak D.
CS (1) Dep. Pathol., Colo. State Univ., Fort Collins, CO 80523 USA
SO Soll, M. D. [Editor]. (1994) pp. 5-10. Proceedings of the Heartworm Symposium '92.
Publisher: American Heartworm Society P. O. Box 667, Batavia, Illinois .60510-0667.

Meeting Info.: Proceedings of the Heartworm Symposium '92 Austin, Texas, USA March 27-29, 1992
ISBN: 1-878353-29-2.
DT Book; Conference
LA English

L6 ANSWER 46 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1996:136246 BIOSIS
DN PREV199698708381
TI Milbemycin oxime as an effective preventative of heartworm (Dirofilaria immitis) infection in cats.
AU Stewart, V. Ann (1); Blagburn, Byron L.; Hendrix, Charles M.; Hepler, Douglas I.; ***Grieve, Robert B.***
CS (1) Dep. Pathology, Colo. State Univ., Fort Collins, CO 80523 USA
SO Soll, M. D. [Editor]. (1994) pp. 127-131. Proceedings of the Heartworm Symposium '92.
Publisher: American Heartworm Society P. O. Box 667, Batavia, Illinois 60510-0667.
Meeting Info.: Proceedings of the Heartworm Symposium '92 Austin, Texas, USA March 27-29, 1992
ISBN: 1-878353-29-2.
DT Book; Conference
LA English

L6 ANSWER 47 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 17
AN 1994:546636 BIOSIS
DN PREV199598006184
TI Novel tyvelose-containing tri- and tetra-antennary N-glycans in the immunodominant antigens of the intracellular parasite Trichinella spiralis.
AU Reason, Andrew J.; Ellis, Lauri A.; Appleton, Judith A.; Wisnewski, Nancy; ***Grieve, Robert B.*** ; McNeil, Michael; Wassom, Donald L.; Morris, Howard R. (1); Dell, Anne (1)
CS (1) Dep. Biochem., Imperial Coll. Sci., Technol. Med., South Kensington, London UK
SO Glycobiology, (1994) Vol. 4, No. 5, pp. 593-603.
ISSN: 0959-6658.
DT Article
LA English
AB The larval stage of the intestinal nematode, Trichinella spiralis, secretes and displays on its cuticle a number of antigenically cross-reactive glycoproteins. These so-called TSL-1 antigens induce a powerful antibody response in parasitized animals. In rats, anti-TSL-1 antibodies mediate a protective immunity that expels invading larvae from the intestine. The vast majority of anti-TSL-1 antibodies are specific for glycans. Although the biological functions of TSL-1 antigens are not known, the powerful effect of glycan-specific antibodies on the intestinal survival of T. spiralis suggests that they play an important role in parasite establishment. Little is known about the structures of the glycans present on the TSL-1 glycoproteins. Recent studies have suggested, however, that the antigens contain very unusual glycans (Wisnewski, N., McNeil, M., Grieve, R.B. and Wassom, D. L., Mol. Biochem. Parasitol., 61, 25-36, 1993). Sugar and linkage analysis of the combined secreted products unexpectedly showed that a major terminal sugar is tyvelose (3,6-dideoxy-D-arabinohexose; Tyv) which has previously been found only in

certain gram-negative bacterial lipopolysaccharides. In this paper, we report the first rigorous structural study of oligosaccharides released from TSL-1 antigens by peptide N-glycosidase F digestion. Using strategies based on fast atom bombardment mass spectrometry (FAB-MS), we have discovered a novel family of tri- and tetra-antennary N-glycans whose antennae are comprised of the tyvelose-capped structure: Tyv1,3GalNAc-beta-1,4(Fuc-alpha-1,3)GlcNAc-beta-1. Thus a major population of TSL-1 glycans contains clusters of hydrophobic terminal structures which are likely to be highly immunogenic.

L6 ANSWER 48 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1993:503307 CAPLUS
DN 119:103307
TI Protease vaccine against heartworm
IN ***Grieve, Robert B.*** ; Richer, Jennifer; Frank, Glenn R.; Sakanari, Judy
PA Colorado State University Research Foundation, USA
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9310225	A1	19930527	WO 1992-US9702	19921112
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
AU 9230723	A1	19930615	AU 1992-30723	19921112
AU 675214	B2	19970130		
EP 635058	A1	19950125	EP 1992-924400	19921112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE				
JP 07501219	T2	19950209	JP 1992-509382	19921112

PRAI US 1991-792209 19911112
WO 1992-US9702 19921112
AB Animals are administered with an effective amt. of a metalloprotease and/or cysteine protease, which is obtainable from filarial nematode lysates in third larval stage (L3) or fourth stage (L4), to immunol. protect the subjects against filarial infection. Dirofilaria immitis was cultured and a protease was obtained by purifying L3/L4 lysates with a column chromatog. and assaying fractions for proteolytic activity on synthetic substrates, i.e. benzyloxycarbonyl-Val-Leu-Arg-7-amido-4-methylcoumarin and Phe-7-amido-4-methylcoumarin.

L6 ANSWER 49 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1994:47157 BIOSIS
DN PREV199497060157
TI Novel tyvelose containing tetraantennary N-glycans in the excretory/secretory antigens of the intracellular parasite Trichinella spiralis.
AU Reason, Andrew J. (1); Ellis, Lauri; Appleton, Judy; Wisnewski, Nancy; McNeil, Michael; ***Grieve, Robert*** ; Wassom, Donald; Morris, Howard R. (1); Dell, Anne (1)
CS (1) Imperial Coll. Sci., Tech. Med., London UK
SO Glycobiology, (1993) Vol. 3, No. 5, pp. 540.
Meeting Info.: 22nd Annual Meeting of the Society for Complex

Carbohydrates San Juan, Puerto Rico November 17-20, 1993
ISSN: 0959-6658.
DT Conference
LA English

L6 ANSWER 50 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 18
AN 1993:320869 BIOSIS
DN PREV199396029219
TI Dirofilaria immitis: Effect of fluoromethyl ketone cysteine protease inhibitors on the third- to fourth-stage molt.
AU Richer, Jennifer K.; Hunt, W. Garrett; Sakanari, Judy A.; ***Grieve,*** *** Robert B. (1)***
CS (1) Dep. Pathol., Coll. Veterinary Med. Biomed Sci., Colorado State Univ., Fort Collins, CO 80523 USA
SO Experimental Parasitology, (1993) Vol. 76, No. 3, pp. 221-231.
ISSN: 0014-4894.
DT Article
LA English
AB D. immitis third-stage larvae (L3) were cultured with fluoromethyl ketone cysteine protease inhibitors. By Day 15 in culture, none of the larvae cultured with 0.1, 0.2, 0.6, or 1.0 mM benzyloxycarbonyl-Phe-Ala-CH-2F (Z-Phe-Ala-CH-2F) has molted, while 63.2% of larvae in media without inhibitor had molted. At the two lower concentrations of inhibitor more larvae had initiated, but not completed, the molt. In addition to Z-Phe-Ala-CH-2F, four other fluoromethyl ketone derivatives, Z-Phe-Arg-CH-2F, amorpholine urea-(Mu)-Leu-Phe-CH-2F, Mu-Tyr-Phe-CH-2F, and Mu-Phe-Phe-CH-2F, were tested to determine their effects on L3 in culture. All fluoromethyl ketones tested except Z-Phe-Arg-CH-2F inhibited molting. Larvae cultured in inhibitors were determined to be alive as judged qualitatively by motility and quantitatively by reduction of 3-(4,5-diethylthiazol-2-yl)-2,5-diphenyltetrazolium. Electron microscopy demonstrated that L3 which were unable to molt after being cultured in a fluoromethyl ketone derivative had synthesized the new fourth-stage (L4) cuticle but had not shed the L3 cuticle. The same fluoromethyl ketone derivative that did not inhibit molting, Z-Phe-Arg-CH-2F, was a slightly less effective inhibitor of larval extract-initiated hydrolysis of the synthetic peptide substrate, Z-Val-Leu-Arg-7-amino-4-methyl coumarin. L3 were also cultured through the molt in media containing the synthetic peptide substrate Z-Val-Leu-Arg-4-methoxy-B-naphthylamide to examine cysteine protease activity in situ. Fluorescence as seen on Days 0-4 during the molting process was first observed on the anterior tip of the larvae, and subsequently in the pharynx, with progression down the L4 as it shed the L3 cuticle.

L6 ANSWER 51 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1993:479347 BIOSIS
DN PREV199396112947
TI Ultrastructure of the infective-stage larva of Toxocara canis (Nematoda: Ascaridoidea.
AU Bowman, Dwight D. (1); Oaks, John A.; ***Grieve, Robert B.***
CS (1) Dep. Microbiol. Immunol. Parasitol., Cornell Univ., Ithaca, NY 14853-6401 USA
SO Journal of the Helminthological Society of Washington, (1993) Vol. 60, No. 2, pp. 183-204.
ISSN: 1049-233X.

DT Article
LA English
AB The ultrastructural morphology of the infective-stage larva of Toxocara canis is described. Seven weeks after eggs were placed in culture in 0.5% formalin, larvae were hatched mechanically and collected 2 days later. Larvae were fixed 3 days at 4 degree C in aldehyde fixative, postfixed in osmium tetroxide, embedded, sectioned and stained. The cuticle has several layers of fibers, and lateral alae extend the length of the body. The lateral cord hypodermis has multiple nuclei, mitochondria, and lipid granules. Muscle cells are meromyarian and platymyarian. A neuronal bundle that innervates the cephalic sensillae runs anteriad from the nerve ring on each side of the worm. The ventral nerve cord has numerous nuclei, mitochondria, and neural fibers. The excretory cell has a single large nucleus, extensive rough endoplasmic reticulum (RER), Golgi bodies, mitochondria, and vesicles presumably containing protein; the 2 excretory columns also have vesicles surrounding a collecting duct. The dorsal sector of the esophagus is much larger than the 2 subventral sectors and contains RER, Golgi bodies, and vesicles with variable density suggesting a maturation of their content. The intestine has no lumen and is composed of a single row of cells containing lipid granules. The rectum is lined with cuticle.

L6 ANSWER 52 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 19
AN 1993:508811 BIOSIS
DN PREV199345107436
TI Expression of Toxoplasma gondii P30 as fusions with glutathione S-transferase in animal cells by Sindbis recombinant virus.
AU Xiong, Cheng (1); ***Grieve, Robert B.*** ; Kim, Kami; Boothroyd, John C.
CS (1) 2301 Res. Blvd., Suite 110, Forth Collins, CO 80526 USA
SO Molecular and Biochemical Parasitology, (1993) Vol. 61, No. 1, pp. 143-148.
ISSN: 0166-6851.
DT Article
LA English

L6 ANSWER 53 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1993:219822 BIOSIS
DN PREV199344104322
TI The excretory-secretory products of Toxocara canis can substitute for live larvae in the immune sensitization of mice for liver trapping.
AU Stewart, V. Ann; ***Grieve, Robert B.***
CS Dep. Pathol., Colorado State Univ., Fort Collins, CO 80523 USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART C, pp. 112.
Meeting Info.: Keystone Symposium on Molecular Helminthology: An Integrated Approach Tamarron, Colorado, USA February 10-17, 1993
ISSN: 0733-1959.
DT Conference
LA English

L6 ANSWER 54 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1993:219803 BIOSIS
DN PREV199344104303
TI Cloning and characterization of a major surface glycoprotein (Gp29) in

Dirofilaria immitis.
AU Frank, Rexann S.; Tripp, Cynthia A.; Selkirk, Murray E.; Grieve, Marcia M.; ***Grieve, Robert B.***
CS Dep. Pathol., Colo. State Univ., Fort Collins, CO 80523 USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART C, pp. 107.
Meeting Info.: Keystone Symposium on Molecular Helminthology: An Integrated Approach Tamarron, Colorado, USA February 10-17, 1993
ISSN: 0733-1959.
DT Conference
LA English

L6 ANSWER 55 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1993:219802 BIOSIS
DN PREV199344104302
TI Characterization of two larval excretory-secretory proteins of Dirofilaria immitis released at the time of the third molt.
AU Frank, Glenn R. (1); ***Grieve, Robert B.***
CS (1) Dep. Pathol., Colo. State Univ., Fort Collins, CO 80523 USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART C, pp. 107.
Meeting Info.: Keystone Symposium on Molecular Helminthology: An Integrated Approach Tamarron, Colorado, USA February 10-17, 1993
ISSN: 0733-1959.
DT Conference
LA English

L6 ANSWER 56 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 20
AN 1993:523926 BIOSIS
DN PREV199396137333
TI Characterization of novel fucosyl-and tyvelosyl-containing glycoconjugates from Trichinella spiralis muscle stage larvae.
AU Wisnewski, Nancy Michael Mcneil (1); ***Grieve, Robert B.*** ; Wassom, Donald L.
CS (1) Paravax, Inc. 2301 Res. Build., Suite 110 Fort Collins, CO 80526 USA
SO Molecular and Biochemical Parasitology, (1993) Vol. 61, No. 1, pp. 25-35.
ISSN: 0166-6851.
DT Article
LA English
AB The monosaccharide composition of an affinity-purified family of antigenically-related Trichinella spiralis larval glycoproteins was determined by gas chromatography/mass spectrometry. This group of 6 major glycoproteins, designated TSL-1, originates in the muscle stage (L1) larval stichosome. They are present on the L1 surface and in excretory/secretory products of L1 larvae, are stage-specific, and are highly immunodominant. The glycosyl composition of the TSL-1 antigens was remarkable in 2 respects: (1) fucose accounted for 36 molar percent of the glycosyl residues; and (2) a 3,6-dideoxyhexose was identified, which accounted for at least 4 molar percent of the glycosyl residues. Previously, 3,6-dideoxyhexoses have been found only in certain Gram-negative bacterial lipopolysaccharides and in ascaroside alcohols (ascarylose) of Ascaris eggs. The 3.6-dideoxyhexose found in the TSL-1 antigens also was found in ES. This Trichinella sugar has been chemically identified as a 3.6-dideoxyarabinohexose, the same as found in Ascaris eggs. However, the absolute configuration of the TSL-1 sugar is

D-(tyvelose), not L-(ascarylose) as is found in Ascaris eggs. Methylation analysis indicated that the TSL-13,6-dideoxy-D-arabinohexose was present entirely as non-reducing terminal residues. Approximately 83% of the fucose was also present as non-reducing terminal residues, with the remaining fucose found as 3,4-linked branched residues.

L6 ANSWER 57 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1992:590108 CAPLUS
DN 117:190108
TI Reagents and methods for identification of vaccines against canine heartworm or other infectious agents
IN ***Grieve, Robert B.*** ; Frank, Glenn; Mika-Grieve, Marcia; Culpepper, Janice A.
PA Colorado State University Research Foundation, USA; Paravax, Inc.
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9213560	A1	19920820	WO 1992-US848	19920130
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU. MC, NL, SE				
CA 2103788	AA	19920813	CA 1992-2103788	19920130
AU 9214237	A1	19920907	AU 1992-14237	19920130
EP 571536	A1	19931201	EP 1992-907018	19920130
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
JP 06508602	T2	19940929	JP 1992-506629	19920130
PRAI US 1991-654226		19910212		
WO 1992-US848		19920130		

AB Cells, serum, or fractions thereof from exposed hosts, esp. those with demonstrated ability to protect against infection, are screening reagents to identify antigens for use in protective vaccines. Biol. materials from exposed native hosts can be validated in vivo in an irrelevant host by their ability to destroy or impair the infectious agent. Validation is performed by implanting the infectious agent, in a membrane enclosure, into an animal host (e.g. a mouse) to which the candidate screening reagent has been transferred. The candidate providing successful destruction or impairment of the infectious agent can then be used to screen antigens produced by cDNA expression libraries or in exts. of the infectious agents to identify components of effective vaccines. Using this method, candidate heartworm immunogens, esp. a 39 kDa immunogen, have been identified.

L6 ANSWER 58 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 21
AN 1993:92420 BIOSIS
DN PREV199395047616
TI Efficacy of milbemycin oxime in chemoprophylaxis of dirofilariasis in cats.
AU Stewart, V. Ann (1); Hepler, Douglas I.; ***Grieve, Robert B. (1)***
CS (1) Dep. Pathol., Colo. State Univ., Fort Collins, Colo. 80523
SO American Journal of Veterinary Research, (1992) Vol. 53, No. 12, pp. 2274-2277.
ISSN: 0002-9645.

DT Article
LA English
AB Although cats are less susceptible to infection with Dirofilaria immitis than are dogs, the possibility of severe consequences from infection or adulticidal treatment renders preventive treatment a desirable alternative in endemic areas. To evaluate the efficacy of milbemycin oxime as a chemoprophylactic agent in cats, 48 cats were inoculated with infective D. immitis larvae. Single oral treatment with 2.3 mg of milbemycin oxime (0.5 to 0.9 mg/kg of body weight) at 30 or 60 days after inoculation with infective larvae gave strong but incomplete protection. Treatment at 60, as well as 90, days after inoculation with infective larvae was completely effective in preventing development of infection. A control group of inoculated, but untreated, cats was monitored biweekly for hematologic changes and for changes in parasite-specific serum antigen and antibody concentrations. Pronounced increases in total leukocyte counts and eosinophil numbers were associated with the estimated time of in vivo molting from fourth- to fifth-stage larvae. Antibody reactivity correlated with infection status, but serum antigen concentrations through 161 days after inoculation were undetectable.

L6 ANSWER 59 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1993:165515 CAPLUS
DN 118:165515
TI Dirofilaria immitis: proteases produced by third- and fourth-stage larvae
AU Richer, Jennifer K.; Sakanari, Judy A.; Frank, Glenn R.; ***Grieve,*** *** Robert B.***
CS Dep. Pathol., Colorado State Univ., Fort Collins, CO, 80523, USA
SO Exp. Parasitol. (1992), 75(2), 213-22
CODEN: EXPAAA; ISSN: 0014-4894
DT Journal
LA English
AB A model of cutaneous extracellular matrix was used to det. if live Dirofilaria immitis larvae secrete proteases that are active at physiol. pH and capable of degrading macromols. found in cutaneous tissue. After 72 h, 100 third-stage larvae (L3) degraded 24% of the total matrix, while fourth-stage larvae (L4) degraded 10%. A sharp increase in the amt. of matrix degraded by L3 corresponded with the onset of the molting process. L3 and L4 degraded comparable amts. of the glycoprotein and elastin components of the matrix, but molting L3 degraded nearly twice the amt. of the collagen component (62% vs 35%). Characterization of proteases present in larval-sol. exts. and excretory-secretory products using synthetic substrates and protease inhibitors demonstrated cysteine-protease and metalloprotease activity. Cysteine protease activity was found in whole worm exts. of both L3 and L4. Metalloprotease was secreted at higher levels by molting L3, but was also secreted by L4. Partial sepn. of the metalloprotease by size-exclusion chromatog. indicated that the mol. wt. of the native enzyme was in the 49-54 kDa range. The cysteine protease activity was demonstrated in fractions corresponding to 34-39 kDa. The biol. function of the D. immitis larval proteases remains to be conclusively detd.; however, these data suggest that they are involved in degrdn. of components of cutaneous tissue and in the molting process.

L6 ANSWER 60 OF 66 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1993:175118 BIOSIS

DN PREV199344082718
TI Control of tissue nematodes utilizing biotechnology.
AU Bell, Robin G. (1); ***Grieve, Robert B.*** ; Philipp, Mario T.
CS (1) James A. Baker Inst. Animal Health, Cornell Univ., Ithaca, NY USA
SO Yong, W. K. [Editor]. (1992) pp. 145-169. Animal parasite control utilizing biotechnology.
Publisher: CRC Press, Inc. Boca Raton, Florida, USA.
ISBN: 0-8493-6843-X.
DT Article
LA English

L6 ANSWER 61 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1992:548889 CAPLUS
DN 117:148889
TI Molecular characterization of a Dirofilaria immitis cDNA encoding a highly immunoreactive antigen
AU Culpepper, Janice; ***Grieve, Robert B.*** ; Friedman, Lori; Mika-Grieve, Marcia; Frank, Glenn R.; Dale, Beverly
CS Paravax, Inc., Mountain View, CA, USA
SO Mol. Biochem. Parasitol. (1992), 54(1), 51-62
CODEN: MBIPDP; ISSN: 0166-6851
DT Journal
LA English
AB The filarial nematode, D. immitis, is the causative agent of canine and feline heartworm disease. Previous research has demonstrated that immunity to D. immitis can be induced in dogs by repeated chem. abbreviation of infections while the parasite is a fourth-stage larva. Sera obtained from dogs immunized in this manner has been effective in passively transferring larval killing and stunting. These immune sera, by comparison to nonimmune sera from infected cohorts, recognize a no. of unique D. immitis antigens, some of which are larval specific. In this study immune dog sera were used to screen a D. immitis larval cDNA expression library. Three overlapping cDNA clones, Di22, Di18 and Di16, were obtained that encode a portion of a large mol., >150 kDa, that is composed of multiples of a 399-bp repeat. This protein when immunoblotted with antibody against a recombinant expressed Di22 fusion protein is found in larval as well as adult exts. and excretory-secretory products, and is seen as a series of ascending subunits, each approx. 15 kDa larger than the previous one. This antigen is highly immunogenic, as evidenced by the strong reactivity of the recombinant expressed Di22 fusion protein with sera from immune dogs, microfilaremic dogs and infected amicrofilaremic dogs. While the function of this antigen is unknown it has significant sequence similarity with an allergen found in Ascaris.

L6 ANSWER 62 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1992:191346 CAPLUS
DN 116:191346
TI Metabolic labeling of Dirofilaria immitis third- and fourth-stage larvae and their excretory-secretory products
AU Frank, Glenn R.; ***Grieve, Robert B.***
CS Dep. Pathol., Colorado State Univ., Fort Collins, CO, 80523, USA
SO J. Parasitol. (1991), 77(6), 950-6
CODEN: JOPAA2; ISSN: 0022-3395
DT Journal
LA English

AB Infective 3rd-stage larvae of D. immitis were collected from Aedes aegypti and cultured in vitro and the 4th stage. Larval proteins were labeled metabolically using [35S]cysteine and methionine in different media and for different lengths of time. Labeled proteins in the excretory-secretory component and the larval homogenates were evaluated by SDS-PAGE under reducing and nonreducing conditions and by 2-dimensional gel electrophoresis. Numerous proteins ranging from 14 to >200 kDa were identified from both the excretory-secretory components and the larval homogenates. Both fractions demonstrated shared and unique proteins. Using timed labeling, age- and stage-specific proteins were identified; .gtoreq.2 proteins of .apprx.20.5 and 22 kDa were assocd. in time with the molt from the 3rd to 4th stage. Two proteins of the same mol. wt. were specifically recognized by immune dog sera, but not by sera of their infected nonimmune cohorts.

L6 ANSWER 63 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1989:526505 CAPLUS
DN 111:126505
TI Effects of milbemycin on adult Toxocara canis in dogs with experimentally induced infection
AU Bowman, Dwight D.; Parsons, James C.; ***Grieve, Robert B.*** ; Hepler, Douglas I.
CS Sch. Vet. Med., Univ. Wisconsin, Madison, WI, 53706, USA
SO Am. J. Vet. Res. (1988), 49(11), 1986-9
CODEN: AJVRAH; ISSN: 0002-9645
DT Journal
LA English
AB To det. the efficacy of a formulation of milbemycins in treating patent infection with T. canis, 8 male and 7 female, 10-wk-old, ascarid-free Beagles each were given 125 embryonated eggs of T. canis. All dogs developed patent infection within 56 days. On post-infection day 70, the dogs were assigned to 1 to 3 groups of 5 dogs each; members of 1 group were given a placebo, while dogs of the other 2 groups were given either 5.68 or 34.08 mg of the milbemycin formulation, resp. In both groups of dogs given the drug, the no. of eggs passed per g of feces decreased precipitously. However, a few eggs still were found in the feces of several dogs of each group on the day of necropsy (postinfection day 75). Worms or fragments of worms were passed by the treated dogs from the day of treatment until the day on which necropsy was performed; however, most worms were passed during the first 2 days after treatment. At necropsy, only dogs of the control group were found to harbor adult T. canis.

L6 ANSWER 64 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1989:69133 CAPLUS
DN 110:69133
TI Effects of a specific thromboxane synthetase inhibitor on development of experimental Dirofilaria immitis immune complex glomerulonephritis in the dog
AU Grauer, Gregory F.; Culham, Cynthia A.; Dubielzig, Richard R.; Presto, Susan K.; Oberley, Terry D.; Thomas, Chester B.; ***Grieve, Robert B.***
CS Sch. Vet. Med., Univ. Wisconsin, Madison, WI, USA
SO J. Vet. Intern. Med. (1988), 2(4), 192-200
CODEN: JVIMEM; ISSN: 0891-6640
DT Journal
LA English

AB Dogs were immunized with aq.-sol. D. immitis antigens, and subsequent to .gtoreq.5-fold increases in serum antibody titer, 6 mg homologous antigen was infused into the left renal artery. Six dogs were treated once daily starting the day of infusion with 0.75 mg/kg of 1-benzylimidazole (1-BIM) in saline. Six control dogs were given saline only. Light, immunofluorescent, and transmission electron microscopic examns. of renal tissue from control dogs, 10 days after antigen infusion, showed a mesangioproliferative glomerulonephritis in the left kidney with polymorphonuclear leukocyte (PMNL) infiltration and fibrin deposition. IgG, IgM, C3, and Dirofilaria antigen deposits were obsd. in a segmental granular pattern. Mesangial, subendothelial, and intramembranous electron dense deposits were obsd., and anti-Dirofilaria antibodies were demonstrated in kidney eluates from each dog. Administration of 1-BIM had no effect on IgG, IgM, C3, or antigen deposits, electron dense deposits, or concn. of antibody in kidney eluates. However, 1-BIM-treated dogs had less glomerular cell proliferation, periodic acid-Schiff pos. glomerular staining, PMNL infiltration, and fibrin deposition. Thus, thromboxane is an important mediator in the development of immune complex glomerulonephritis, and, in certain circumstances, inhibition of thromboxane synthesis may be an effective therapy for immune complex glomerulonephritis in dogs.

L6 ANSWER 65 OF 66 CAPLUS COPYRIGHT 2000 ACS
AN 1988:609272 CAPLUS
DN 109:209272
TI Solubilization of epicuticular antigen from Dirofilaria immitis third-stage larvae
AU Mok, Meisen; ***Grieve, Robert B.*** ; Abraham, David; Rudin, Werner
CS Sch. Vet. Med., Univ. Wisconsin, Madison, WI, USA
SO Mol. Biochem. Parasitol. (1988), 31(2), 173-82
CODEN: MBIPDP; ISSN: 0166-6851
DT Journal
LA English
AB The solubilization of epicuticle from third-stage (L3) D. immitis larval .cuticles was investigated. Cuticles collected after L3 had molted were incubated in 1.5% SDS at 37.degree. with vigorous shaking. Solubilization of epicuticular layers was accomplished as demonstrated by electron microscopy. Diminished binding of an epicuticular specific monoclonal antibody (DIM-229) was seen when SDS-treated cuticles were compared to untreated cuticles in an indirect fluorescence antibody assay. Cuticles which were extd. further by boiling in 1.5% dithiothreitol (DTT) produced less protein than cuticles solubilized in SDS. Both exts. reacted with DIM-229 in in indirect ELISA, indicating retention of antigenic reactivity of the solubilized epitope. SDS-PAGE of SDS-derived antigens revealed, after silver staining, proteins from 12 to 77 kDa and only 1 band at 15 kDa for SDS-treated cuticles boiled in DTT. Western blot analyses of the exts. with DIM-229 were inconclusive.

L6 ANSWER 66 OF 66 USPATFULL
AN 87:26358 USPATFULL
TI Serodiagnosis of heartworm infection
IN ***Grieve, Robert B.*** , Radnor, PA, United States
PA University Patents, Inc., Westport, CT, United States (U.S. corporation)
PI US 4657850 19870414
AI US 1981-335179 19811228 (6)

DT Utility
EXNAM Primary Examiner: Warren, Charles F.; Assistant Examiner: Tarcza, J. E.
LREP Marshall, O'Toole, Gerstein, Murray & Bicknell
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 369
AB An improvement in immunological methods for quantitative detection of Dirofilaria immitis antibodies in a fluid sample comprising a treatment of the sample with Toxocara canis-derived antigens.

=> s p22u

L7 22 P22U

=> dup rem l7

PROCESSING COMPLETED FOR L7
L8 16 DUP REM L7 (6 DUPLICATES REMOVED)

=> d bib ab 1-

YOU HAVE REQUESTED DATA FROM 16 ANSWERS - CONTINUE? Y/(N):y

L8 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 1
AN 2000:307114 CAPLUS
DN 132:331145
TI Parasitic helminth phospholipase A2-like (PLA2) proteins, cDNAs, and recombinant virus vaccines for heartworm infection.
IN Fgrieve, Robert B.; Frank, Glenn R.; Wisnewski, Nancy
PA Heska Corporation, USA
SO U.S., 62 pp., Cont.-in-part of U.S. 5,804,200.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6060281	A	20000509	US 1995-482304	19950607
WO 9415593	A1	19940721	WO 1994-US679	19940112
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5804200	A	19980908	US 1995-408120	19950320

PRAI US 1991-654226 19910212
US 1993-3257 19930112
US 1993-101283 19930803
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320
US 1993-3389 19930112

US 1993-109391 19930819

AB The present invention relates to parasitic helminth PLA2 proteins and nucleic acid mols. encoding such proteins. In particular, the nucleic acid mols. encoding proteins selectively binding to immune serum from animals infected by Dirofilaria immitis, or animals immunized with Dirofilaria immitis third stage or fourth stage larvae, are claimed. The present invention also includes methods and compns. to obtain such proteins, including recombinant viruses and cells. Several antigenic proteins that selectively bind to serum from dogs immune to heartworm infection were identified. Proteins of 22 and 20.5 kDa, designated ***P22U*** , P22L, and P20.5, present in L3 and L4 stages of D. immitis were purified. CDNAs encoding these proteins were cloned and sequenced. The deduced amino acid sequences of these proteins revealed similarities to snake and mammalian PLA2 sequences. The recombinant P22L protein expressed in E. coli selectively bound to immune serum and induced the prodn. of antibodies in rabbits and dogs capable of recognizing the corresponding native and recombinant heartworm antigens. Recombinant virus vaccines expressing D. immitis PLA2 protein protected cats from heartworm infection. Corresponding PLA2 proteins and cDNAs were obtained from Onchocerca volvulus and Brugia malayi.

RE.CNT 23

RE

(5) Amiri; Mol Biochem Parasitol 1988, V28, P113 CAPLUS

(7) Anon; WO 9003433 1990 CAPLUS

(9) Bianco; Mol Biochem Parasitol 1990, V39, P203 CAPLUS

(13) Chomczynski; Anal Biochem 1987, V162, P156 CAPLUS

(15) Culpepper; Mol Biochem Parasitol 1992, V54, P51 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 16 USPATFULL

AN 2000:109347 USPATFULL

TI Delivery method for recombinant raccoon poxvirus

IN Osorio, Jorge E., Mount Horeb, WI, United States
Stinchcomb, Dan T., Fort Collins, CO, United States

PA Heska Corporation, Fort Collins, CO, United States (U.S. corporation)

PI US 6106841 20000822

AI US 1998-18798 19980204 (9)

DT Utility

EXNAM Primary Examiner: Mosher, Mary E.

LREP Heska Corporation

CLMN Number of Claims: 17

ECL Exemplary Claim: 1,3

DRWN No Drawings

LN.CNT 692

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a novel method to immunize an animal against a heterologous antigen. The method includes the step of administering to the animal, by an intranasal route, a conjunctival route, or a combination thereof, a composition comprising a recombinant raccoon poxvirus having a nucleic acid molecule encoding such a heterologous antigen. Animals to be immunized include those that are susceptible to such routes of recombinant raccoon poxvirus administration. Preferred animals to immunize include felids. Preferably, any immune response generated by the animal against viral antigens of the recombinant raccoon poxvirus is sufficiently small so as

to not prevent the animal from eliciting an immune response to a heterologous antigen encoded by a recombinant raccoon poxvirus subsequently administered to the animal.

L8 ANSWER 3 OF 16 USPATFULL
AN 2000:102422 USPATFULL
TI Parasitic helminth ***p22U*** nucleic acid molecules
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn Robert, Ft. Collins, CO, United States
Grieve, Robert B., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6100390 20000808
AI US 1995-458860 19950602 (8)
RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. Ser. No. US 1993-3389, filed on 12 Jan 1993 And Ser. No. US 1991-654226, filed on 12 Feb 1991 , said Ser. No. US 3257 And Ser. No. US 3389 which is a continuation-in-part of Ser. No. US 654226
DT Utility
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Swartz, Rodney P.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2469
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to isolated parasitic helminth nucleic acid sequences capable of hybridizing, under stringent conditions, to at least a portion of D. immitis nucleic acid sequence p4 and/or to at least a portion of D. immitis nucleic acid sequence ***p22U*** ; to isolated parasitic helminth proteins that are encoded by such parasitic helminth nucleic acid sequences and that are capable of selectively binding to at least one component of immune serum capable of inhibiting helminth development; and to antibodies raised against such isolated parasitic helminth proteins. The present invention also relates to therapeutic compositions comprising such isolated nucleic acid sequences, proteins and/or antibodies. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compositions capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L8 ANSWER 4 OF 16 USPATFULL
AN 2000:101876 USPATFULL
TI Parasitic helminth PLA2 proteins
IN Grieve, Robert B., Fort Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
Wisnewski, Nancy, Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)

PI US 6099843 20000808
AI US 1995-483474 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1995-408120, filed on 20 Mar 1995, now patented, Pat. No. US 5804200 which is a continuation of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned And a continuation-in-part of Ser. No. US 1994-225479, filed on 8 Apr 1994, now abandoned And a continuation-in-part of Ser. No. US 1993-101283, filed on 3 Aug 1993, now abandoned , said Ser. No. US 654226 And a continuation-in-part of Ser. No. WO 1994-US679, filed on 12 Jan 1994 , said Ser. No. US 3257 which is a continuation-in-part of Ser. No. US 1993-3389, filed on 12 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876
DT Utility
EXNAM Primary Examiner: Minnifield, Nita; Assistant Examiner: Masood, Khalid
LREP Sheridan Ross P.C.
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 13 Drawing Page(s)
LN.CNT 4190
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasitic helminth PLA2 proteins; to parasitic helminth PLA2 nucleic acid molecules, including those that encode such proteins; to antibodies raised against such proteins; and to compounds that inhibit parasitic helminth phospholipase A.sub.2 activity. The present invention also includes methods to obtain such proteins, nucleic acid molecules, antibodies, and inhibitors. Also included in the present invention are therapeutic compositions comprising such proteins, nucleic acid molecules, antibodies, and/or inhibitors as well as the use of such therapeutic compositions to protect animals from diseases caused by parasitic helminths.

L8 ANSWER 5 OF 16 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 2
AN 1999:385879 BIOSIS
DN PREV199900385879
TI Parasitic helminth ***p22U*** proteins.
AU Tripp, Cynthia Ann (1); Frank, Glenn Robert; Grieve, Robert B.
CS (1) Department of Exercise and Sport Science, Colorado State University, Ft. Collins, CO USA
ASSIGNEE: Colorado State University Research Foundation
PI US 5912337 Jun. 15, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Jun.15, 1999) Vol. 1223, No. 3, pp. NO PAGINATION.
ISSN: 0098-1133.
DT Patent
LA English

L8 ANSWER 6 OF 16 USPATFULL
AN 1999:15487 USPATFULL
TI Dirofilaria immitis GP29 antibodies and uses thereof
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)

PI US 5866126 19990202
AI US 1997-833622 19970408 (8)
RLI Continuation of Ser. No. US 1995-462177, filed on 5 Jun 1995, now patented, Pat. No. US 5618532 which is a continuation of Ser. No. US 1994-208885, filed on 8 Mar 1994, now patented, Pat. No. US 5569603, issued on 29 Oct 1996
DT Utility
EXNAM Primary Examiner: Caputa, Anthony C.; Assistant Examiner: Navarro, Mark
LREP Sheridan Ross P.C.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1757
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to D. immitis Gp29 proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and inhibitors of D. immitis glutathione peroxidase. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasitic helminths, such as heartworm.

L8 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2000 ACS
AN 1999:60589 CAPLUS
DN 130:294200
TI Molecular cloning of the 22-24 kDa excretory-secretory 22U protein of Dirofilaria immitis and other filarial nematode parasites
AU Frank, Glenn R.; Wisnewski, Nancy; Brandt, Kevin S.; Carter, Clive R. D.; Jennings, Nicola S.; Selkirk, Murray E.
CS Heska Corporation, Fort Collins, CO, 80525, USA
SO Mol. Biochem. Parasitol. (1999), 98(2), 297-302
CODEN: MBIPDP; ISSN: 0166-6851
PB Elsevier Science Ireland Ltd.
DT Journal
LA English
AB Proteins with mol. masses of .apprx.20.5 and 22 kDa were identified in D. immitis larval excretory-secretory products. Proteins Di20 and Di22L were larval specific, while Di22U was detd. to be present in both larval and adult worms.
RE.CNT 25
RE
(1) Altschul, S; J Mol Biol 1990, V215, P403 CAPLUS
(2) Collins, M; Anal Biochem 1985, V151, P211 CAPLUS
(3) Devaney, E; Parasite Immunol 1991, V13, P75 CAPLUS
(4) Donelson, J; Mol Biochem Parasitol 1988, V31, P241 CAPLUS
(5) Forsyth, K; Mol Biochem Parasitol 1984, V10, P217 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 16 USPATFULL
AN 1998:51474 USPATFULL
TI Filariid nematode cysteine protease proteins
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn R., Ft. Collins, CO, United States

Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5750391 19980512
AI US 1995-463989 19950605 (8)
RLI Continuation of Ser. No. US 1994-249552, filed on 25 May 1994, now abandoned
DT Utility
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai
LREP Sheridan Ross P.C.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2683
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasite astacin metalloendopeptidase and filariid cysteine protease proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and compounds that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasites, such as heartworm.

L8 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 3
AN 1997:436582 CAPLUS
DN 127:107982
TI Parasitic helminth proteins of Dirofilaria immitis, cDNA cloning, and their use to prevent heartworm infection
IN Tripp, Cynthia Ann; Frank, Glenn Robert; Grieve, Robert B.
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 28 pp. Cont.-in-part of U.S. Ser. No. 3,257, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5639876	A	19970617	US 1993-109391	19930819
CA 2153494	AA	19940721	CA 1994-2153494	19940112
WO 9415593	A1	19940721	WO 1994-US679	19940112
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9461254	A1	19940815	AU 1994-61254	19940112
EP 680316	A1	19951108	EP 1994-907845	19940112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE				
JP 08505772	T2	19960625	JP 1994-516380	19940112
US 5686080	A	19971111	US 1995-459019	19950602
US 5912337	A	19990615	US 1995-460428	19950602
US 6100390	A	20000808	US 1995-458860	19950602
US 5977306	A	19991102	US 1995-487031	19950606

US 6099843 A 20000808 US 1995-483474 19950607
AU 9864878 A1 19980827 AU 1998-64878 19980512
PRAI US 1991-654226 19910212
US 1993-3257 19930112
US 1993-3389 19930112
US 1993-101283 19930803
US 1993-109391 19930819
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320
AB Parasitic helminth nucleic acid sequences capable of hybridizing to at least a portion of the nucleic acid sequence encoding p4 or ***p22U*** of Dirofilaria immitis are provided. The p4-encoding nucleic acid sequence is about 913 nucleotides in length and comprises an open reading frame of 303 amino acids which has an LDL receptor-related protein class A cysteine-rich motif of 9 amino acids. The p4 nucleic acid was isolated from a D. immitis L3 and/or L4 cDNA expression library using immune serum collected from a dog that was immunized by repeated chem. abbreviated infections. The ***p22U*** nucleic acid encodes at least a substantial portion of the ***P22U*** protein, which has been identified in larval excretory-secretory exts. as well as in exts. of L3,L4 and adults. The parasitic helminth proteins are capable of selectively binding to .gtoreq.1 components of immune serum and thus inhibiting helminth development. Antibodies against such isolated parasitic helminth proteins are also raised. Therapeutic compn.s contg. such isolated nucleic acid sequences, proteins, and/or antibodies are provided. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies, and therapeutic compns. capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L8 ANSWER 10 OF 16 USPATFULL
AN 97:109749 USPATFULL
TI Filariid cysteine protease genes
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn R., Ft. Collins, CO, United States
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5691186 19971125
AI US 1995-463262 19950605 (8)
RLI Continuation of Ser. No. US 1994-249552, filed on 26 May 1994, now abandoned
DT Utility
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai
LREP Ross P.C., Sheridan
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2667
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to parasite astacin metalloendopeptidase and filariid cysteine protease proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and compounds that can inhibit the activities of parasite astacin metalloendopeptidases or cysteine proteases. The present

invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasites, such as heartworm.

L8 ANSWER 11 OF 16 USPATFULL
AN 97:104113 USPATFULL
TI Parasitic helminth p4 proteins
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn Robert, Ft. Collins, CO, United States
Grieve, Robert B., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5686080 19971111
AI US 1995-459019 19950602 (8)
RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation-in-part of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. Ser. No. US 1993-3389, filed on 12 Jan 1993, now abandoned And Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US -3257 And Ser. No. US -3389 , each Ser. No. US - which is a continuation-in-part of Ser. No. US -654226
DT Utility
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2279
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to isolated parasitic helminth nucleic acid sequences capable of hybridizing, under stringent conditions, to at least a portion of D. immitis nucleic acid sequence p4 and/or to at least a portion of D. immitis nucleic acid sequence ***p22U*** ; to isolated parasitic helminth proteins that are encoded by such parasitic helminth nucleic acid sequences and that are capable of selectively binding to at least one component of immune serum capable of inhibiting helminth development; and to antibodies raised against such isolated parasitic helminth proteins. The present invention also relates to therapeutic compositions comprising such isolated nucleic acid sequences, proteins and/or antibodies. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compositions capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L8 ANSWER 12 OF 16 USPATFULL
AN 97:29198 USPATFULL
TI Dirofilaria immitis Gp29 proteins and uses thereof
IN Tripp, Cynthia A., Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)

PI US 5618532 19970408
AI US 1995-462177 19950605 (8)
RLI Continuation of Ser. No. US 1994-208885, filed on 8 Mar 1994, now patented, Pat. No. US 5569603
DT Utility
EXNAM Primary Examiner: Hendricks, Keith D.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 16
ECL Exemplary Claim: 15
DRWN No Drawings
LN.CNT 1784
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to D. immitis Gp29 proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and inhibitors of D. immitis glutathione peroxidase. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasitic helminths, such as heartworm.

L8 ANSWER 13 OF 16 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 4
AN 1997:356251 BIOSIS
DN PREV199799662654
TI A preliminary assessment of the recombinant antigen PLA2 in the diagnosis of human dirofilariosis.
AU Vieira, C.; Muro, A.; Cordero, M.; Simon, F. (1)
CS (1) Lab. Parasitologia, Univ. Salamanca, Avda. Campo Charro s/n, 37007 Salamanca Spain
SO Parasite, (1997) Vol. 4, No. 2, pp. 193-196.
ISSN: 1252-607X.
DT Article
LA English
SL English; French
AB Two recombinant antigens (***P22U*** and PLA2), cloned in a L4 Dirofilaria immitis cDNA library, were analyzed by Western-blot and ELISA to investigate their characteristics for the diagnosis of human dirofilariosis. ***P22U*** seems related to a Di22 native antigen useful for the diagnosis of pulmonary dirofilariosis, but it is unspecifically recognized by sera from patients with different parasitic and non parasitic pulmonary diseases. PLA2 is not related to Di22 but specifically reacts in Western-Blot and ELISA with sera from patients with subcutaneous dirofilariosis.

L8 ANSWER 14 OF 16 USPATFULL
AN 96:99157 USPATFULL
TI Dirofilaria immitis GP29 proteins, nucleic acid molecules and uses thereof
IN Tripp, Cynthia A., Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5569603 19961029
AI US 1994-208885 19940308 (8)

DT Utility
EXNAM Primary Examiner: Hendricks, Keith D.
LREP Sheridan Ross & McIntosh
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1766
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to D. immitis Gp29 proteins, nucleic acid molecules having sequences that encode such proteins, antibodies raised against such proteins and inhibitors of D. immitis glutathione peroxidase. The present invention also includes methods to obtain such nucleic acid molecules, proteins, antibodies and inhibitors. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and inhibitors as well as their use to protect animals from disease caused by parasitic helminths, such as heartworm.

L8 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2000 ACS
AN 1995:130543 CAPLUS
DN 122:7946
TI Parasitic helminth proteins of Dirofilaria immitis and cDNA cloning
IN Grieve, Robert B.; Frank, Glenn R.; Mika-Grieve, Marcia; Tripp, Cynthia Ann
PA Paravax, Inc., USA; Colorado State University Research Foundation
SO PCT Int. Appl., 153 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9415593	A1	19940721	WO 1994-US679	19940112
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5639876	A	19970617	US 1993-109391	19930819
AU 9461254	A1	19940815	AU 1994-61254	19940112
EP 680316	A1	19951108	EP 1994-907845	19940112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE				
JP 08505772	T2	19960625	JP 1994-516380	19940112
US 5977306	A	19991102	US 1995-487031	19950606
US 6114142	A	20000905	US 1995-473034	19950606
US 6060281	A	20000509	US 1995-482304	19950607
US 6099843	A	20000808	US 1995-483474	19950607

PRAI US 1993-3257 19930112
US 1993-3389 19930112
US 1993-109391 19930819
US 1991-654226 19910212
US 1993-101283 19930803
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320

AB Parasitic helminth nucleic acid sequences capable of hybridizing to at least a portion of nucleic acid sequence p4, ***p22U*** , P39, P22L and or P20.5 of Dirofilaria immitis are provided. The parasitic helminth proteins are capable of selectively binding to .gtoreq.1 components of immune serum and thus inhibiting helminth development. Antibodies against such isolated parasitic helminth proteins are also raised. Therapeutic compns. contg. such isolated nucleic acid sequences, proteins and/or antibodies are claimed. The present invention also includes methods to produce and use such nucleic acids, proteins, antibodies and therapeutic compns. capable of protecting animals from parasitic helminth infection and, particularly, from heartworm infection.

L8 ANSWER 16 OF 16 JAPIO COPYRIGHT 2000 JPO
AN 1987-003202 JAPIO
TI OPTICAL FILTER
IN UEDA KAZUHIKO
PA VICTOR CO OF JAPAN LTD, JP (CO 000432)
PI JP 62003202 A 19870109 Showa
AI JP1985-141693 (JP60141693 Showa) 19850628
SO PATENT ABSTRACTS OF JAPAN, Unexamined Applications, Section: P, Sect. No. 581, Vol. 11, No. 17, P. 162 (19870602)
AB PURPOSE: To decrease return distortions by forming double refracting transparent plates having the sepn. distance equal to the pitch in such a manner that the sepn. distance component in the scanning direction is half the pitch and that the sepn. distance component in the opposite direction is also half the pitch.
CONSTITUTION: Rays 251, 252 are double refracted in the 2nd crystal plate 22 and are so separated that the sepn. distance component in the u-axis direction attains ***P22u*** equal to a/2 and the sepn. distance component in the v-axis direction attains P22v equal to b/2 (=a/2), namely, said rays are separated by the distance P22 (=a/.sqroot.2) in the direction +45.degree. with respect to the u-axis by which the rays are separated to 251 and 253 as well as 252 and 254. The sepn. directions are in the direction 45.degree. with resepct to the respective polarization directions of the rays 251, 252 and therefore half the respective components of the rays 251, 2524 remain and half the same are separated. The intensities of the rays 251-254 are 1/4 the intensity of the original unit luminous flux and equal to each other. The return components from the carrier are thereby decreased and the components of the return distortion part are decreased.

=> s l8 and antibod?

L9 12 L8 AND ANTIBOD?

=> d bib 1-

YOU HAVE REQUESTED DATA FROM 12 ANSWERS - CONTINUE? Y/(N):y

L9 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2000 ACS
AN 2000:307114 CAPLUS
DN 132:331145
TI Parasitic helminth phospholipase A2-like (PLA2) proteins, cDNAs, and

recombinant virus vaccines for heartworm infection.
IN Fgrieve, Robert B.; Frank, Glenn R.; Wisnewski, Nancy
PA Heska Corporation, USA
SO U.S., 62 pp., Cont.-in-part of U.S. 5,804,200.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6060281	A	20000509	US 1995-482304	19950607
WO 9415593	A1	19940721	WO 1994-US679	19940112

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 5804200	A	19980908	US 1995-408120	19950320

PRAI US 1991-654226 19910212
US 1993-3257 19930112
US 1993-101283 19930803
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320
US 1993-3389 19930112
US 1993-109391 19930819
RE.CNT 23
RE
(5) Amiri; Mol Biochem Parasitol 1988, V28, P113 CAPLUS
(7) Anon; WO 9003433 1990 CAPLUS
(9) Bianco; Mol Biochem Parasitol 1990, V39, P203 CAPLUS
(13) Chomczynski; Anal Biochem 1987, V162, P156 CAPLUS
(15) Culpepper; Mol Biochem Parasitol 1992, V54, P51 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2000 ACS
AN 1997:436582 CAPLUS
DN 127:107982
TI Parasitic helminth proteins of Dirofilaria immitis, cDNA cloning, and their use to prevent heartworm infection
IN Tripp, Cynthia Ann; Frank, Glenn Robert; Grieve, Robert B.
PA Heska Corp., USA; Colorado State University Research Foundation
SO U.S., 28 pp. Cont.-in-part of U.S. Ser. No. 3,257, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5639876	A	19970617	US 1993-109391	19930819
CA 2153494	AA	19940721	CA 1994-2153494	19940112
WO 9415593	A1	19940721	WO 1994-US679	19940112

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
AU 9461254 A1 19940815 AU 1994-61254 19940112
EP 680316 A1 19951108 EP 1994-907845 19940112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE
JP 08505772 T2 19960625 JP 1994-516380 19940112
US 5686080 A 19971111 US 1995-459019 19950602
US 5912337 A 19990615 US 1995-460428 19950602
US 6100390 A 20000808 US 1995-458860 19950602
US 5977306 A 19991102 US 1995-487031 19950606
US 6099843 A 20000808 US 1995-483474 19950607
AU 9864878 A1 19980827 AU 1998-64878 19980512
PRAI US 1991-654226 19910212
US 1993-3257 19930112
US 1993-3389 19930112
US 1993-101283 19930803
US 1993-109391 19930819
WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320

L9 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2000 ACS
AN 1995:130543 CAPLUS
DN 122:7946
TI Parasitic helminth proteins of Dirofilaria immitis and cDNA cloning
IN Grieve, Robert B.; Frank, Glenn R.; Mika-Grieve, Marcia; Tripp, Cynthia Ann
PA Paravax, Inc., USA; Colorado State University Research Foundation
SO PCT Int. Appl., 153 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 11

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9415593	A1	19940721	WO 1994-US679	19940112

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 5639876	A	19970617	US 1993-109391	19930819
AU 9461254	A1	19940815	AU 1994-61254	19940112
EP 680316	A1	19951108	EP 1994-907845	19940112

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE

JP 08505772	T2	19960625	JP 1994-516380	19940112
US 5977306	A	19991102	US 1995-487031	19950606
US 6114142	A	20000905	US 1995-473034	19950606
US 6060281	A	20000509	US 1995-482304	19950607
US 6099843	A	20000808	US 1995-483474	19950607

PRAI US 1993-3257 19930112
US 1993-3389 19930112
US 1993-109391 19930819
US 1991-654226 19910212
US 1993-101283 19930803

WO 1994-US679 19940112
US 1994-225479 19940408
US 1995-408120 19950320

L9 ANSWER 4 OF 12 USPATFULL
AN 2000:109347 USPATFULL
TI Delivery method for recombinant raccoon poxvirus
IN Osorio, Jorge E., Mount Horeb, WI, United States
Stinchcomb, Dan T., Fort Collins, CO, United States
PA Heska Corporation, Fort Collins, CO, United States (U.S. corporation)
PI US 6106841 20000822
AI US 1998-18798 19980204 (9)
DT Utility
EXNAM Primary Examiner: Mosher, Mary E.
LREP Heska Corporation
CLMN Number of Claims: 17
ECL Exemplary Claim: 1,3
DRWN No Drawings
LN.CNT 692
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 5 OF 12 USPATFULL
AN 2000:102422 USPATFULL
TI Parasitic helminth ***p22U*** nucleic acid molecules
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn Robert, Ft. Collins, CO, United States
Grieve, Robert B., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6100390 20000808
AI US 1995-458860 19950602 (8)
RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. Ser. No. US 1993-3389, filed on 12 Jan 1993 And Ser. No. US 1991-654226, filed on 12 Feb 1991 , said Ser. No. US 3257 And Ser. No. US 3389 which is a continuation-in-part of Ser. No. US 654226
DT Utility
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Swartz, Rodney P.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2469
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 6 OF 12 USPATFULL
AN 2000:101876 USPATFULL
TI Parasitic helminth PLA2 proteins
IN Grieve, Robert B., Fort Collins, CO, United States
Frank, Glenn R., Wellington, CO, United States
Wisnewski, Nancy, Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)

Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
PI US 6099843 20000808
AI US 1995-483474 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1995-408120, filed on 20 Mar 1995, now patented, Pat. No. US 5804200 which is a continuation of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned And a continuation-in-part of Ser. No. US 1994-225479, filed on 8 Apr 1994, now abandoned And a continuation-in-part of Ser. No. US 1993-101283, filed on 3 Aug 1993, now abandoned , said Ser. No. US 654226 And a continuation-in-part of Ser. No. WO 1994-US679, filed on 12 Jan 1994 , said Ser. No. US 3257 which is a continuation-in-part of Ser. No. US 1993-3389, filed on 12 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876
DT Utility
EXNAM Primary Examiner: Minnifield, Nita; Assistant Examiner: Masood, Khalid
LREP Sheridan Ross P.C.
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 13 Drawing Page(s)
LN.CNT 4190
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 7 OF 12 USPATFULL
AN 1999:15487 USPATFULL
TI Dirofilaria immitis GP29 ***antibodies*** and uses thereof
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5866126 19990202
AI US 1997-833622 19970408 (8)
RLI Continuation of Ser. No. US 1995-462177, filed on 5 Jun 1995, now patented, Pat. No. US 5618532 which is a continuation of Ser. No. US 1994-208885, filed on 8 Mar 1994, now patented, Pat. No. US 5569603, issued on 29 Oct 1996
DT Utility
EXNAM Primary Examiner: Caputa, Anthony C.; Assistant Examiner: Navarro, Mark
LREP Sheridan Ross P.C.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1757
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 8 OF 12 USPATFULL
AN 1998:51474 USPATFULL
TI Filariid nematode cysteine protease proteins
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn R., Ft. Collins, CO, United States
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5750391 19980512

AI US 1995-463989 19950605 (8)
RLI Continuation of Ser. No. US 1994-249552, filed on 26 May 1994, now abandoned
DT Utility
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai
LREP Sheridan Ross P.C.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2683
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 9 OF 12 USPATFULL
AN 97:109749 USPATFULL
TI Filariid cysteine protease genes
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn R., Ft. Collins, CO, United States
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5691186 19971125
AI US 1995-463262 19950605 (8)
RLI Continuation of Ser. No. US 1994-249552, filed on 26 May 1994, now abandoned
DT Utility
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai
LREP Ross P.C., Sheridan
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2667
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 10 OF 12 USPATFULL
AN 97:104113 USPATFULL
TI Parasitic helminth p4 proteins
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States
Frank, Glenn Robert, Ft. Collins, CO, United States
Grieve, Robert B., Ft. Collins, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5686080 19971111
AI US 1995-459019 19950602 (8)
RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation-in-part of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. Ser. No. US 1993-3389, filed on 12 Jan 1993, now abandoned And Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US -3257 And Ser. No. US -3389 , each Ser. No. US - which is a continuation-in-part of Ser. No. US -654226
DT Utility
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1

DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2279
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 11 OF 12 USPATFULL
AN 97:29198 USPATFULL
TI Dirofilaria immitis Gp29 proteins and uses thereof
IN Tripp, Cynthia A., Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5618532 19970408
AI US 1995-462177 19950605 (8)
RLI Continuation of Ser. No. US 1994-208885, filed on 8 Mar 1994, now patented, Pat. No. US 5569603
DT Utility
EXNAM Primary Examiner: Hendricks, Keith D.
LREP Sheridan Ross P.C.
CLMN Number of Claims: 16
ECL Exemplary Claim: 15
DRWN No Drawings
LN.CNT 1784
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 12 OF 12 USPATFULL
AN 96:99157 USPATFULL
TI Dirofilaria immitis GP29 proteins, nucleic acid molecules and uses thereof
IN Tripp, Cynthia A., Ft. Collins, CO, United States
Selkirk, Murray E., London, England
Grieve, Robert B., Windsor, CO, United States
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)
PI US 5569603 19961029
AI US 1994-208885 19940308 (8)
DT Utility
EXNAM Primary Examiner: Hendricks, Keith D.
LREP Sheridan Ross & McIntosh
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1766
CAS INDEXING IS AVAILABLE FOR THIS PATENT.